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THE SULPHURIC ACID TREATMENT OF CHOLERA AND OTHER CHOLERAIC DISEASES.

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The cholera, like nearly all the other choleraic diseases, is a most dangerous and deceitful disease. In the first place, it cheats its victims by the decided luxury of the early diarrhœa and therefore puts the person off his guard. In the second place, it does its work all too often in the interior by draining the watery portion of the blood into the bowels without its appearance externally. The often mysterious and sudden cases are largely of this kind, the copious external flood coming down later in the disease, or on relaxation of the sphincter at death. In both these respects the public should be informed, that proper aid may be early sought.

To these points for the people, I want to add the most emphatic of all for the profession—that the true choleraic discharges are *alkaline*, while those of cholera infantum are mostly *acid*. Therefore the alkaline treatment of the latter, particularly by the hyposulphite of soda, is in the line of success, while the acid treatment, particularly by the sulphuric acid, is the proper treatment for the Asiatic cholera, since the choleraic *microbes do not flourish in acid liquids, while they do in alkaline*, the acid preventing their development and work. This is the most practical fact which the whole science of the cholera has yet developed. For while opium, empirically, is serviceable in checking the early diarrhœa, the fixed mineral acids practically beard the wolfish microbes in their den. And certainly no other one treatment has developed so much in its favor as the acid. That it has done so no more, is because it has not been wisely administered and properly trusted.

So far as I have had experience in the use of acid in choleraic diarrhœa, I have been highly pleased with the results. But my purpose in this writing is to show some cards I have in my hands.

Pettenkofer noted the alkalinity of choleraic dejections, and states that safety lies in preventing the ammoniacal change in the urine and fæces, and that the agents which will accomplish this are the mineral salts, the mineral and carbolic acids. The excrements may therefore always be rendered innocuous and conveyed away from the vicinity of human dwellings while still in an acid and harmless state.

Dr. W. I. Cox, of Kensal Town, was the first to use sulphuric acid in cholera in England. Through the aid of Dr. Herepath of Bristol, England, he made the discovery that a celebrated Austrian remedy consisted chiefly of sulphuric acid.

Dr. S. T. Chandler, of Kentucky, having had experience in the epidemics of 1854 and 1873, in the use of the acid, states that it "relieves the nausea, arrests the vomiting like a charm, and gradually the dejections are stopped."

Dr. McClellan confirms the value of the acid treatment, and gives it the credit of reducing the cholera mortality to 8 per cent., while the lowest by other means is 23 per cent. and from that up to 59.

Dr. John M. Woodworth, supervising surgeon U. S. Marine-Hospital Service, said: "Beginning with the year 1814, the cholera literature down to the present time abounds in proofs, clinical, physiological and metrological, of the efficacy of sulphuric acid."

Bristowe, Aitken and others express a disbelief in the power of medicines to cut the cases of cholera short, yet they make no reference to the mineral acid treatment. The writer is sure that the cholerine and the early stages of the cholera proper will almost certainly yield promptly to the acids alone, or them in connection with small doses of laudanum.

"My own conviction is," says Dr. Fuller, who had large experience with the use of sulphuric acid, "that in sulphuric acid we have an antidote—a specific—against choleraic diarrhœa, if not against the worst forms of cholera, as powerful and energetic, and as certain in its effects, as cinchona bark or quinia against a paroxysm of ague."

From these cases, however, must be excluded the bilious and chronic diarrhœas. Fuller is emphatic in saying that "in epidemic diarrhœa, in acute autumnal diarrhœa, and in the more decided choleraic diarrhœa, I have known no single instance of its failure; indeed, the more choleraic the diarrhœa the more speedily are its curative effects produced."

It is evident that the dosage and the frequency and care in its administration, as in the administration of any other powerful drug, must be considered, if there is to be the desired effect. As I read, I am persuaded that this has not been the case with most physicians with respect to this remedy. I therefore let Dr. Fuller have his own say: "If those gentlemen who make trial of the remedy so strongly recommended by Mr. Buxton would use it as they ought, in the manner and in the dose he directs, and administer it only in proper cases, we should seldom, if ever, hear of its failing to arrest the course of the disease. In every instance within my own knowledge," says he, "in which it has failed in its efficacy, the blame has been chargeable upon those who have administered it, rather than upon any want of virtue in the remedy itself. They have either given it in insufficient doses, or else in cases of bilious diarrhœa with foul breath and loaded bowels, which would have been benefited by a brisk purge of calomel and rhubarb." "In Asiatic cholera, given in 3ss doses of the dilute sulphuric acid, it exercises a most favorable influence." (See Braithwaite, Part 28, page 306.)

To this add what Mr. W. Wilkinson says: "If the serous fluid lost be considerable or if the disease should run into its third stage, it is of importance to administer some astringent which can be depended upon, together with some medicine, so to uphold or stimulate the nervous power as to prevent entire loss of control over the capillaries of the intestinal mucous membrane." He corroborates the opinions of several members of our profession as to the efficacy of sulphuric acid. Therefore he would "in every case in the second stage, after the preliminary, or immediately in the third stage, when from the copious action of the bowels the preliminary treatment would be unnecessary, prescribe dilute sulphuric acid, 3ss; strychnia in acid phosphoric solution, one-sixteenth of a grain."

The acid is rarely rejected except it be not sufficiently diluted, or something else is added to it. The first dose may be rejected. In suitable doses and in proper time it is wonderful how speedily the cramps, neuralgias and vomiting cease and the cold, contracted skin warms up.

Dr. Fuller thinks success depends more on the manner of giving the acid than with most remedies. He regards twenty minutes between doses quite sufficient in ordinary cases, and that ten minutes is enough in the severer ones. A dose that is rejected should be followed by another immediately, but this rarely occurs. If retained the drinks of the acid water may be more and more copiously taken, to extensively flush the intestinal tract.

Dr. Miller gives account of twenty-seven cases of choleraic diarrhœa treated with the acid, some of which cases were very bad, and some of them infants. His prescription consisted of dilute sulphuric acid and comp. tincture of cardamoms.

Dr. Sheppard used the acid treatment in twenty-seven cases of English cholera. He succeeded in all but one, and concludes as follows:

In these cases sulphuric acid is more efficacious than alkalies, opiates and astringents, comparing as ten to one.

It is more active (especially in children), greatly exceeding twenty to one.

It appears to act in a more rational and scientific manner, by increasing the tone of the mucous membrane of the alimentary canal, rather than by astringing its pores.

The worse the case the more rapid and marvelous is the cure—a most striking feature as compared with the treatment by chalk and opium. (See Ranking's Abstract, No. 16, p. 90.)

Wherever the cholera gains a foothold, all alkaline and fermentessible fluids should be discarded, and lightly acidulated drinks used. Weak aromatic sulphuric acidade, carefully prepared and taken through a glass tube, would be very pleasant, refreshing and wholly harmless. Such drinks might be substituted for the soda fountain by the apothecaries to profit and advantage, a glass two or three times a day being a good prophylactic.

MYRRHOLIN is a solution of one part of myrrh in one of oil, and is said to have given good results in tuberculous laryngitis; it is administered in capsules containing 0.20 gm. of myrrholin and 0.30 gm. of creosote.—*L'Union pharm.*

THE TREATMENT OF DIPHTHERIA.

Read before the Pennsylvania State Medical Society in May, 1892.

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I do not propose to offer anything new on this subject, but only to state a treatment that has been reasonably successful in my hands.

In the fall of 1870, my attention was first directed to the efficacy of the calomel treatment in the socalled pseudo membranous croup in the following novel and somewhat accidental manner. This was before Dr. W. C. Reiter, of Pittsburgh, published his monograph on the treatment of diphtheria, and it was during a time when pseudo membranous croup was treated with emetics such as Turpeth mineral, ipecac, tartar emetic, and other relaxing remedies, drugs which I never was satisfied as to their efficacy and was always skeptical as to the benefit that might be derived from their use in the treatment of this disease. At the time above stated I was called to see a case suffering with the above named disease. The case was a very grave one. A boy three years of age was lying in a crib gasping for air and with an anxious countenance. The respirations were abdominal. Beads of sweat were standing out on his face. The case I thought was a proper one for tracheotomy. I sent for Dr. A. M. Pollock, of Pittsburgh, to counsel in the case. The doctor coincided with me as to the necessity of an immediate operation. But when the parents of the child had had explained to them the full import of the operation they would not consent to it. We then put the child on three grains of calomel and one grain of ipecac every hour, with inhalation of steam from slaking lime. The next day about noon, after having seen the patient in the forenoon, I was discharged. An irregular was called in, and as I learned afterwards, that about the time that fifty-four grains of the calomel and eighteen grains of ipecac had been taken, and at the time the first so-called medication of the irregular commenced, the boy expectorated the membrane and thereafter recovered.

In 1874 another case. A boy, six years old, was suffering with the same disease. For two days he was in imminent danger of death from asphyxia, when I put him on three grains of calomel every hour, and in twenty-four hours thereafter he expectorated the membrane and recovered. This boy was treated about the time, either before or after Dr. William Pepper reported a successful treatment in pseudo-membranous croup with bichloride of mercury.

At that time the profession believed that pseudo-membranous croup and diphtheria were dual diseases, but I believe now they are considered by the profession to be one and the same disease. It may be paradoxical but my experience teaches me to have more faith in the calomel or corrosive sublimate treatment in the so-called pseudo-membranous croup and in the mild form of pharyngeal diphtheria, where the diphtheritic membrane is white and not deep, than I have in the use of either in the more malignant form where the membrane is grey, deep, and the parts around swollen and red. In the more malignant form of pharyngeal diphtheria I have had more success in the muriatic tincture of iron and chlorate of potash treatment with whiskey ad libitum.

In the more malignant form of pharyngeal diph-

theria, as may be inferred from what I have already said, I have been reasonably successful with tincture of the chloride of iron and chlorate of potash and whiskey treatment. Other physicians claim that they have been most successful in this form of the disease with calomel or corrosive sublimate, but I have not had the same satisfactory results with the latter treatment. The tincture of the chloride of iron has a dual efficacious effect in diphtheria. Locally it acts as an antiseptic. Constitutionally it is a tonic. The chlorate of potash also acts as an antiseptic. Care should be taken that the chlorate of potash is not given in too large doses. To an adult not more than one and a half to two drachms, should be given during twenty-four hours. To a child one year old not more than twenty grains during the same time, and to a child two or three years old, a drachm is sufficient. With this drug given in quantities according to ages as above enumerated the physician should be watchful that it does not irritate the stomach nor kidneys, nor that the same large doses be continued for many consecutive days. Fatal have been the results in some cases when this precaution has been disregarded.

Whiskey has also a dual efficacious effect when administered in cases of diphtheria. Locally it is an antiseptic. Constitutionally a stimulant. Patients suffering with diphtheria tolerate the remedy well, and it can be administered in large quantities without having an over stimulating effect. In the administration of whiskey we should not push it to a point where it might disagree with the stomach. However, in all our medication we should endeavor not to make the stomach rebellious.

With regard to the calomel treatment if the good results of this treatment is not evident in two or three days, it should be dropped. Last June I saw, in consultation with the physician in attendance upon a case of pharyngeal diptheria, the evil results of too long a continuance with the calomel treatment. It had been continued in three grain doses to a child five years old, for more than a week when the child died. The case was likely complicated with mercurial poisoning, and was of scrofulous diathesis. Strumous children do badly under calomel treatment.

If the throat presents an inflammatory condition, small pieces of ice may be allowed to melt in the mouth. If the throat has a septic discharge mild antiseptic washes, sprays or gargles, as a solution of bichloride of mercury, peroxide of hydrogen, chlorate of potash, carbolic acid, salicylic acid, boric acid, lime water, chlorine water, or iron, may be used but these should never be too strong, so as to have an irritating effect. Heretofore I have not been an advocate of local applications to the throat in the treatment of diphtheria, except in isolated cases, as I have thought the remedies prescribed and taken into the stomach had also an antiseptic effect locally, and that the inconvenience of the patient brought about by their use did more harm than good.

With our present knowledge of diptheria, I think we may assert without fear of successful contradiction that the following propositions as facts are well established.

That the false membrane of diphtheria is doubtless produced by the earliest products of the bacillus diphtheria.

That diphtheria first manifests itself locally, usually in the pharynx, larynx or nasal passages.

That the constitution is secondarily affected by the later products of the bacillus diphtheria.

That there is no evidence at present that there is any disease other than diphtheria that will produce false membrane in the larynx.

That when croup is caused by false membrane in the larynx, it is laryngeal diphtheria.

Now since diphtheria is first a local disease and is produced by the earliest products of the bacillus diphtheria, the rational treatment would appear to be in the early stage of the disease, if possible to attack the bacillus diphtheria *in situ*. For this purpose Dr. August Seibert has devised an implement by which the bacilli can be reached, and he claims destroyed, by injecting strong chlorine water underneath the pseudo-membrane. The implement used has a number of hypodermic points set closely together on a disc, and these points may be made to penetrate the pseudo-membrane through which the chlorine water or any other suitable antiseptic may be injected, thereby coming in immediate contact with the bacilli. Dr. Alexander Fulton, of Philadelphia, claims that he has had thirty-seven consecutive cures of pharyngeal diphtheria by the local application of twenty grains of nitrate of silver in one-half ounce of rose water applied with a brush.

When the earliest products of the diphtheria bacillus is found in the nasal passages it would seem to be our duty to attack it there with a suitable antiseptic (or bacillicide) by douche, spray or injection.

Diphtheritic paralysis, which often follows diphtheria, is invariably complicated with anæmia. These cases should be carefully fed and treated. Iron, quinine and strychnine are appropriate remedies where there are no contra-indications to their use. Many cases improve under this treatment, but the improvement is not rapid. In one case which came under my observation in which the left arm of the child was paralyzed after a severe attack of diphtheria, the paralysis remained permanent. Sometimes it is better only to give one of the above named drugs at a time and alternate one with another as the case may indicate. Electricity is often a valuable remedy and is of benefit when other remedies may fail.

The patient suffering with diphtheria should remain in bed during the disease and should not be allowed to rise too soon after convalescence is established. Fatal heart failure has too often been witnessed by not regarding this rule.

We should not forget to sustain the patient with a concentrated nourishment such as milk, cream, beef essence, eggnog, milk punch, and quench thirst with plenty of pure water.

In the treatment of diphtheria further than can be done with antiseptics locally in the early stages of the disease before the constitution is affected, there seems to be no specific. Each case should be treated on its own merits. There is much, however, that can be done in a prophylactic way that may ameliorate the gravity of disease, if not entirely prevent it. The sewerage of the house should be as perfect as can be. The escape pipes should be trapped. The house should be well ventilated and, as cleanliness is next to Godliness, it should be kept clean. The cellar should be well aired, freed from all decaying vegetation and its walls whitewashed once or twice a year. The beds and bedding should be kept scrupulously clean.

The carpets should be taken up and cleaned at least once a year, and floors scrubbed. Drawers, bookcases and closets should also be renovated. Sulphate of iron, Labarraque's solution of soda or chloride of lime may be used to disinfect the cellar when necessary.

The family should not use spring or well water for drinking purposes without it first having been subjected to a boiling heat. The children in a family should be well watched and when any symptoms may arise indicating those of diphtheria the family physician should be called in immediately.

A common situation for the barn-yard, pig-sty and water-closet in a country place or residence is on an elevated portion of ground overlooking a spring or well of water from which the family get their supply of drinking water. This breach of sanitary measures I have long since noticed and have known the inhabitants of such districts suffer greatly for this violation of sanitary measures. In a village in which I lived when a boy I remember an epidemic of dysentery broke out in the place, I thought then it was a visitation of God. I know now that God had nothing to do with it. It was caused by a contamination of drinking water from wells which were located lower than the barn-yards, pig-styes and water closets of the place. Country people are slow to learn the importance of observing a strict sanitary law in erecting their dwellings and outbuildings. In the country districts with which I am well acquainted these same violations of sanitary measures still exist and they still are severely punished in disease and death by such violations. The sanitary measures which are intended to be enforced in cities are not as perfect as they might be, but they are far in advance of those observed in country districts. A knowledge of hygiene and the laws governing hygiene should be taught in all our public schools and other institutions of learning and the importance of such a law being practically enforced. Until such a knowledge is imparted to all of our citizens, and the importance of observing a strict sanitary law everywhere, we may expect diphtheria and other germinal diseases to exist among our people.

If one member or more of a family are attacked with diphtheria, the house should be immediately, if not already put in order sanitarily and fumigated with sulphur. The remaining children of the family that can conveniently should be sent away, or into a room in the same house as far away as possible from the patient. None of the members of the family except the nurse should be allowed in the same room with the patient. No kissing the patient by the mother or other relatives should be tolerated.

It has often occurred to me that conditions favorable to the cause and spread of diphtheria and other germinal diseases often lurk in those spaces between the ceiling and the floor immediately above, between the joists, in dwellings. These spaces are no doubt, receptacles of years of accumulated dirt and filth which must be fruitful factors in the cause and spread of diphtheria. And I have often thought that our ancestors were more fortunate than we are in allowing these spaces to remain open and thereby preventing these accumulations.

Inasmuch as I deem it a duty to respect the dead and to bury or dispose of their bodies in an honorable and a respectable manner, yet we have a far higher duty to perform, and that is to take care of the living. Hence, the bodies of those who die of contagious or infectious diseases should be disposed of in such a way as not to endanger the life or health of the living.

In September, 1891, Professor J. Lewis Smith, New York, wrote: "We need scarcely rehearse the awful devastations of this dread disease. We are not alarmists, but in the mortality statistics compared for the last two decades, we as sanitarians, must admit that we have not got at the root of the evil. Our health regulations are superficial at best, and our courage falters in the face of an advancing epidemic. In France the total numb r of deaths is in excess of the births, and this state of affairs appalling to the nation, is largely due to diphtheria. There were nearly three thousand deaths in New York and Brooklyn, caused by diphtheria and croup in 1889." He further states, to come to the point, which we desire to quote and emphasize, "Diphtheria is a filth disease. The Klebs Loeffler bacillus obtains a nidus favorable for its development and propagation in filth accumulations of all kinds."

Dr. Sternberg, in his Lomb prize essay, refers to the fact that damp, foul places such as sewers, cellars, ill-ventilated spaces under floors where the sunlight never enters and where refuse collects, afford conditions favorable to the growth of diphtheritic germs. These germs, conveyed by house drainage or otherwise to a deposit of filth, grow and multiply in it and ascending in foul vapors which arise from it, communicate diphtheria to the unfortunate child who inhales them.

THE TREATMENT OF ALCOHOLIC INEBRIETY.

Read before the Northwestern Medical and Surgical Association, March 18, 1893, and before the American Association for the Study and Cure of Inebriety, March 23, 1893.

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There is no class of cases that comes under the care of the physician that presents greater difficulties in the way of treatment than that of sufferers from alcoholic inebriety. To the practitioner are brought such as are in the stage of alcoholic neurasthenia, such as present symptoms of acuter alcoholic conditions, such as have delirium tremens, such as are insane from the abuse of this poison, and such as exhibit actual organic lesions of the nervous system, like alcoholic neuritis and alcoholic pseudo-ataxia. Patients may come under his observation in any of these states, or in the intervals between paroxysmal outbreaks of the drink habit, when they may present no particular symptoms. He may be required to treat the *nervous* conditions of alcoholic excess, and there may be lesions of other than nervous viscera demanding his attention, like gastric disorder and cirrhosis and their sequelæ. Thus, there are states for immediate attention, and there is the habit itself exacting his best judgment and skill in the way of eradication and prophylaxis. There is, therefore, a wide fie!d for therapeutic applications of great variety, but into all of this region it is not the purpose of the writer to venture. Leaving out the treatment of the chronic organic conditions such as lesions of the peripheral nervous system and viscera, our advice

is generally sought to relieve the excitement or nervous exhaustion of a recent debauch, and to formulate some plan for combating the tendency to recurrence.

In the first instance, the bromides and chloral are among our best agents when the excitement and insomnia are moderate in degree. When severe, we may have to employ some such remedy as duboisine, $\frac{1}{200}$ to $\frac{1}{100}$ of a grain by mouth or hypodermatically. Strychnia should be used under all circumstances, as well in conditions of excitement, as in conditions of neurasthenia following upon it. It is often an efficient hypnotic in these cases. It is best given hypodermatically. The nitrate of strychnia is preferable, and may be administered in doses of $\frac{1}{60}$ to $\frac{1}{30}$ of a grain, every two to six hours. The beneficial effects of hydrotherapy are not to be ignored, and in all instances it is better to make use at first of the hot wet pack for insomnia instead of narcotics internally, only resorting to the latter where the former fails to induce the desired effect.

The hot wet pack is thus applied:

A blanket 9x9 feet is spread upon the bed, and on this a sheet wrung out dry after dipping in hot water. The patient lies down upon the hot wet sheet, and this is then folded over him, and everywhere adjusted closely to the body surface, the blanket being similarly evenly folded over this, and other blankets added if necessary. The patient remains in this an hour or longer—all night if asleep.[1]

Naturally the stomach should be attended to, and the intestines relieved.

Thus, the best treatment of acute alcoholism of any form may be briefly summarized:

1. Cut off all alcohol, and confine to bed.
2. Blue pill at night, followed by saline cathartic.
3. Hot wet pack for sleeplessness.
4. Hypodermatic injection of nitrate of strychnia, gr. $\frac{1}{60}$ to $\frac{1}{30}$.
5. Water, milk, kumyss, broths, soup, meat juice, raw eggs, arrowroot, juicy fruits and the like, when there is gastric disturbance.

This is the outline, in short, of a kind of treatment adapted to all cases of acute alcoholism, though as before stated, bromide and chloral, or duboisine, are indicated in a certain number of instances.

In chronic alcoholism, which manifests itself most commonly as a form of neurasthenia, the following should be the ordinary routine treatment:

1. Cut off alcohol.
2. Hot wet pack for insomnia.
3. Disturbances of the alimentary canal to be met by aperients and dyspeptic remedies (rhubarb and soda, hydrochloric acid and the like). The diet should be milk, eggs and vegetable foods, meats rarely.
4. Strychnia again the main agent to restore nerve tone; best given hypodermatically, but may be given by mouth in combination with quinine, or in fluid extract of cinchona ($\frac{1}{60}$ to dr. j), or in infusion of gentian.

Having now briefly gone over what I consider to be the best methods of meeting immediate conditions apparent in any case of inebriety brought to the physician for advice and treatment, the more important question arises as how to rid him of the habit—how to cure the disease of inebriety. This is a most complex question, and one that has for many decades commanded the attention of all men, laymen, lawyers, physicians and charlatans. Either the desire for alcohol must be got rid of, or the alcohol itself must be made unattainable. To eradicate the desire appeal has been made to the enfeebled will of the victim by lectures, pledges, hypnotic suggestion, religious influences and the like, sometimes with success; and drugs have been lauded by physicians, and secret nostrums by quacks, to accomplish the same end, sometimes also with success, though not so much through the merit of being an antidote to the desire for drink, as by virtue of the support by faith or suggestion given the weak will of the patient.

On the other hand, to make alcohol unattainable, the law has been invoked to regulate liquor-selling in general, to prevent its sale to drunkards, to imprison habitués, or to commit them to inebriate institutions for a definite length of time. All of these means have been successful in individual instances. But no drug has been found that is always equal to destroying the desire, and the laws are inadequate as regards regulation of the liquor traffic and the isolation of the drunkard from his ruling demon. Sequestration in a penitentiary is limited by the law, and the writ of habeas corpus has been the evil genius of special institutions for inebriates. Many are committed to insane asylums, but after a few weeks of rest and treatment, the debauch is recovered from, and not being insane, the asylum has no longer the power to detain them. So they come and go several times in the year with the regularity of the seasons. The rich try the inebriates' homes, and the poor are condemned to the penitentiaries. They are "repeaters." Think of being brought up for the two hundred and forty-sixth time before a police court for drunkenness; yet this has happened, and the defendant was a woman!

In the cases that generally present themselves to us, commitment is as a rule the last resort. We try moral suasion, occasionally hypnotism, and we make usually half-hearted attempts at treatment by drugs. We send them on long sea voyages on sailing vessels containing no liquor; we try the watchful care of a companion or nurse. Sometimes these means are effectual, generally not. The despairing friends after a time resort to the advertising quacks. Their remedies are no more efficient than those already in our hand, but it must be confessed that they often take more pains with each individual case than we do. Some of the advertised inebriety cures seem to be not only swindles, but cruel and criminal swindles. Several years ago the chemist of the Massachusetts State Board of Health analyzed some of these so-called cures for inebriety in order to ascertain how much alcohol they contained. The analyses published were as follows:[2]

Scotch oats essence	contained	35	per cent.	alcohol.
The "Best" tonic	"	7.65	"	"
Carter's Physical Extract	"	22	"	"
Hoofland's German Tonic	"	29.3	"	"
Hop Tonic	"	7	"	"
Howe's Arabian Tonic	"	13.2	"	"
Jackson's Golden Seal Tonic	"	19.6	"	"
Liebig Co's Cocoa Beef Tonic	"	23.2	"	"
Mensman's Peptonized Beef Tonic	"	16.5	"	"
Parker's Tonic	"	41.6	"	"
Schenck's Seaweed Tonic	"	19.5	"	"

[1] Hydrotherapy in Nervous and Mental Diseases, by Frederick Peterson, M.D., Amer. Jour. Med. Sciences, February, 1893.

[2] Medical Register, July, 1888.

The so-called gold cure of Keeley, upon analysis, was found to contain no gold at all, but in each teaspoonful about $\frac{1}{32}$ of a grain of muriate of ammonia, $\frac{1}{4}$ of a grain of aloin, and 45 minims of compound tincture of cinchona. His hypodermic injection was ascertained to be composed of sulphate of strychnia, atropia, and boracic acid. The Keeley cure while it has been doubtless effectual in curing many cases of inebriety, has not made use of any drug not long ago tried by physicians all over the world. One of the advantages of this much lauded method is undoubtedly the effects of repeated suggestion. We have not been in the habit of paying that particular attention to inebriates that is necessary; we are too prone to dismiss such a case with a mere prescription and some good advice. I may be pardoned for citing an instance of the value of continuous attention. A young man of wealth was apparently a confirmed inebriate. Everything had been done for him on ordinary lines that could be done—drugs, moral influenced, change of scene and occupation, the dismissal of his boon companions. I found a teetotal sailing vessel and sent him to the South Seas and China, a nine months' voyage without a drink. He came back robust, hopeful, took to drink at once and had incipient delirium tremens in a few days at a hotel. Before sending him to an inebriate institution for which I had made arrangements, I decided to give him one more trial. An occupation was found for him in a down-town office, and he was put upon the strychnine treatment, but was made to report daily at my office at a certain hour. This he did for a year. He has not tasted a drop for three years, and is married, prosperous and happy. I believe the continued attention and suggestion of the daily visits to my office were the remedial agents in his case, the strychnine merely acting as a prop to his nervous system as he was passing through the ordeal of deprivation of his wonted stimulant. Since then I have had several other cases. Hypnotism I have tried once or twice with considerable success. The treatment I should outline for the removal of the habit, and which I have found often very efficacious is briefly as follows:

1. The hypodermatic injection of nitrate or strichnia in the doses already given, at least twice daily, more frequently if possible, and always by the physician himself. The moral influence and personality of the physician are of the greatest importance. By this frequent contact of physician and patient the effort and attention of the inebriate are kept continually at their highest pitch.

2. A diet of milk, eggs and vegetable foods should be enforced, meats being allowed but once daily.

3. Regular occupation, regular hours, and the avoidance of the society of fast companions must be insisted upon.

4. There is a certain class of patients to whom a substitute for a dram of liquor is at times imperative; when the desire comes on it must be satisfied. The substitute must be immediately at hand. With some of these, a combination of strychnia and fluid extract of cinchona (gr. $\frac{1}{10}$ to dr. j) taken with a glass of water, works very well. It is not always convenient however to carry a bottle in the pocket so I am at times in the habit of prescribing powders composed of from twenty to forty grains of red cinchona bark, half a grain of capsicum, and three grains of powdered nux vomica, to be taken with a glass of water when required.

As I have already stated, the Keeley cure depends largely upon suggestion for its results. It has had many successes, but of course also many failures, which latter are seldom published to the world. I have had four Keeley failures under observation. One is now insane with complications of hepatic cirrhosis and chronic gastric catarrh, and their sequelæ. He will not live long. The second is also insane. The third is under treatment with me. The fourth has been apparently cured in a sanitarium for inebriates, and has had no liquor for over a year.

There is a multitude of cases in which no treatment yet devised avails to check the alcoholic propensity, and in these the only alternative is to put them out of the reach of alcohol. How difficult this is to accomplish is well known to us all. Commitment for three to six months, which is the longest period permissable in all the institutions I know of in this country, is merely temporizing. It should be commitment for one to two years or even more. It is a fact that the nervous system and the heart and other organs do not recover their normal equilibrium in less than two years after prolonged alcoholism, and sometimes even four to six years are needed to reëstablish healthy functions. Recently a step in the right direction has been taken by an institution in this city. For some five years, I have been the attending physician of the House of Mercy, which is in charge of the Sisters of St. Mary, of the Episcopal church. When they removed from the foot of West Eighty-sixth street to new buildings at Inwood, I induced them to form a department for inebriate women in the new quarters. The Sisters became interested in the project and the trustees have had a bill passed by the New York Legislature which is quite unique in this country. This department of the House of Mercy is called the St. Saviour's Sanatorium. It is empowered to receive women inebriates either by voluntary or legal commitment. In the latter case two physicians are required to make out certificates, and upon these a judge commits the patient for a year. Before the expiration of the year, she may be recommitted if it is deemed expedient for another year. Hence, patients may be detained here for two years. This feature of extended commitment for a long period marks a new epoch in the history of such establishments. St. Saviour's Sanatorium is beautifully situated on the Hudson river in the upper part of New York City. The rooms and parlors are cheerful, pleasant and inviting. Out-of-door exercise and drives, as well as in-door employment, and the companionship of the Sisters and lady visitors are features of the treatment. Thus far there are accommodations for but sixteen patients, and these are selected from the refined and cultured classes, the institution being too small for the accommodation of all classes of female inebriates, even if it were possible or desirable to mingle people occupying different moral and intellectual stations in life.

There is also in this city a somewhat similar institution for male inebriates, the New York Christian Home, where religious influence is the chief remedial agent. I am convinced of the great usefulness of such influence in many cases.

One of the great drawbacks to all homes of this kind is the *tedium vitæ* from which patients are apt to suffer; there is not sufficient employment or recreation; the routine and monotony become irksome.

If I were to suggest an ideal means of dealing with inebriates it would be the establishment of a little world in which alcohol had no place, but in which life with its various occupations, domestic arrangements, and amusements went on exactly the same. It would in fact be a colonization scheme, such as has proved so valuable in the case of epileptics and of the insane, only much more extensive and much more feasible. The problem involved is merely the exclusion of alcohol from all part in the colony's affairs. It is true that this could not be accomplished in any region open to ordinary traffic, travel, and communication; even a Chinese wall built around such a colony would not protect it from the invasion of its enemy; it would find some means to percolate through. But I can imagine some Temperance Island so far removed from the main land as not to be accessible to small boats, with only one harbor, five to ten or more miles in diameter, amenable to the laws of the United States, the property of a corporation of practical philanthropists, where all boats and baggage and merchandise would be thoroughly quarantined against the introduction of alcohol as if it were a comma bacillus, or the microbe of the Black Death. Here would be villages and industries, manufactures and arts, the commoners and the gentry, living in business prosperity and domestic happiness. Thither the drunkard would repair with his family, and obtaining a position, support himself and them, and lead a useful life as if such a thing as inebriety never existed. A majority of inebriates would immigrate there of their own accord, but certain ones would need commitment by law for three years. Such commitment, however, would be no hardship, for the rights of voting, of citizenship, the solace of society, the pleasure of following one's trade or calling, of earning a livlihood, and of living with one's family would make existence not only tolerable but blessed. The realization of such a project is not an "irridescent dream." It is quite within the bounds of feasibility. A small additional tax upon spirits and spirit-venders would be sufficient to acquire some Nantucket and consecrate it to this purpose.

201 W. 54th Street. New York.

A CASE OF SUFFOCATIVE LARYNGO-TRACHEITIS, AND A METHOD OF IMMEDIATE RELIEF.

BY DR. EDWIN J. KUH,
OF CHICAGO, ILL.

In illustration of an additional indication for the method described in my article, "A Topical Treatment of Bronchitis," (*Philadelphia Medical News*, of March 11, 1893, and *Chicago Medical Recorder* of March, 1893,) I wish to describe the following case:

Mrs. L. L. attended a ball shortly after her return from a wedding trip to the South. The day following I found her suffering from what seemed to be an ordinary laryngo tracheitis. On the succeeding morning I was again called and found the conditions greatly changed. She had been awake all night suffering from an attack or "croup." As this was to her a familiar reminiscence from childhood, she was more amused at her sudden rejuvenation, than alarmed at her distress.

I found her with accelerated and stridulent respiration, and cyanotic face. There was a gurgling sound of advancing and receding mucus in the wind-pipe. Occasionally the mucus would become so lodged as to suppress respiration altogether; she would then struggle violently to regain her breath. Temperature 101°.

I found the pharynx almost normal. Aditus ad laryngem moderately swollen and congested. The glottis covered with a sticky, yellow-greenish secretion. Upon inspiration, the tracheal mucosa presented itself swelled and with engorged capillaries; thick bands of very tenacious green discharge stretched across the trachea, almost blocking it up.

During the previous night the patient had vomited several times. I again forced vomiting, and in various ways succeeded in giving transitory relief; the secretions would, however, gather again. During the forty minutes consumed in these observations, the patient had several attacks of suffocation, from each of which it seemed more difficult for her to regain herself.

I then decided, in view of my experience in the rapid elimination of bronchial secretions (see article quoted above) to apply the deep spray. The success of its application was as rapid and striking as we see it in intubation for laryngeal stenosis. Each inhalation of the spray scooped out the tenacious, cohesive discharge, which was so adherent to the mucous membrane as to carry away admixtures of blood with each expectoration.

The patient was then put back to bed, entirely relieved of dyspnœa, and sank into an exhausted sleep. Her recovery took place without further incident, except that the sputa remained bloody for a few days following.

3125 Michigan Ave.

BRONCHOCELE, THYROIDECTOMY.

Read before the St. Louis Medical Society,

BY L. H. LAIDLEY, M.D.,
PROFESSOR OF GYNECOLOGY, BEAUMONT MEDICAL COLLEGE; SURGEON TO PROTESTANT HOSPITAL; CONSULTING SURGEON TO FEMALE HOSPITAL, ST. LOUIS.

Miss W., aged twenty-two years, school teacher, of healthy parentage, was born and lived in the south-eastern part of Missouri. At the age of thirteen had an enlargement make its appearance over the thyroid gland, which gradually enlarged until two years ago, when it began to grow rapidly. The form of development was the usual larger right lobe the size of an orange, the left being one-fourth its size. Immediately above the right another smaller enlargement was observed, which in all probability was an auxiliary thyroid gland undergoing degeneration. The physical symptoms were rapid increase in loss of strength, being unable to go up stairs without great difficulty, loss of flesh, palpitation of the heart with mental disturbances. Her general appearance had changed so rapidly as to alarm her friends. She was anæmic, with the usual anxious and greatly distressed appearance. Her eyes were slightly protruding, which may have been due to the nervous impressions arising from the disturbance of the heart's action and increased rapidity in breathing; her voice was normal. A measurement over the most prominent part of the tumor measured fourteen and three-fourths inches. It was movable and would rise and fall in the act of deglutition. It was not adherent to the overlapping skin, and had no attachment to the

clavicle or jaw. It was covered with prominent veins; upon auscultation the peculiar blowing sound of this disease was very noticeable. The lungs and heart were normal except in rapidity of breathing and heart-beat. All the organs of the abdomen were normal. After consultation with Drs. Dalton and Outten, who fully concurred in my diagnosis that we had a fibrous bronchocele producing the usual manifestations, which was progressing so rapidly as to demand an immediate operation, on the 27th of February the patient was placed under the influence of chloroform, and an incision four inches in length was made over the greater prominence of the right lobe of the tumor. The superficial structures were cut through carefully, cutting one of the sterno-hyoid muscles in order to expose it completely. The tumor was then carefully enucleated in all its attachments, exposing a broad base which was transfixed by a strong ligature, tied off and cut. The amount of hæmorrhage following the operation was very slight, not more than half an ounce of blood being lost. The wound was cleansed and the external opening closed with silkworm thread. The left lobe and the auxiliary lobe were allowed to remain. The patient had a rapid and uninterrupted recovery. On the seventh day a slight bulging over the tumor in its most dependent part was noticed. It was opened and an ounce of dark blood evacuated, after which the wound was cleansed and union was completed in a few days. One month after the operation the measurements around the neck were twelve and one-half inches, showing a decrease of two and one-fourth inches in circumference. She was greatly improved in health; the action of the heart was greatly improved and the breathing was about normal. The eyes appeared more natural, and she was able to ascend stairs with perfect ease. No change in her voice was noticeable. A microscopic examination of the tumor showed it to be of the fibrous form af bronchocele.

From the literature of this subject I formulate the following conclusions: That in the treatment of this form of bronchocele it belongs to the domain of surgery; that electricity has no influence in its removal, likewise medicines are inert; that the operation as a rule can be safely made. It was formerly practiced with extreme rarity because of the difficulties to be encountered. The two principal dangers to be overcome as the result of this operation, namely: tetany and cachexia strumipriva, can be avoided by the removal of only a part of the tumor, which has been demonstrated by the experiments of Bardeleben, Horsley and others. This subject is receiving attention due it, especially from an operative standpoint. The subject of how much influence this disease and removal of the thyroid gland has in producing the above form of affection is an unsettled question in physiology, alike of interest to the pathologist and operative surgeon. Can we not hope that some researches in physiology will determine the theories now held beyond the possibility of a doubt?

3538 Washington Ave.

MIGRAINE may be relieved, Lucking says, with a pill, twice daily for some time, consisting of Indian hemp one-sixth grain, phosphide of zinc one-tenth grain, and arsenic one-thirtieth grain. The severity of the attack may be effectually diminished with liquor trinitrinæ in minim doses two or three times daily.—*The Clinical Journal.*

SOCIETY PROCEEDINGS.

Gynecological Society of Boston.

Regular Meeting held March 9, 1893.

THE PRESIDENT, DR. J. C. IRISH, IN THE CHAIR.

Pathological Specimens.—Dr. G. Ryder showed two dermoid cysts that had caused trouble for three years and finally necessitated removal. The growth was in two distinct masses, one consisting of a single large cyst, the other multiocular. One was situated in the median line, the other, in left ovarian region. The right ovary could not be determined, and was probably represented by the median growth. The contents of the tumors consisted of hair, sebaceous material, and one tooth.

Remarks.—Dr. Irish aid it was rare to find both ovaries degenerated into dermoid cysts, and that according to Tait's theory, the condition was congenital, and represented twins, one developing, and the other, after a brief period of growth undergoing retrogressive degeneration, and existing at the expense of the former. If this theory is true, the present case must represent triplets.

New Instruments.—Dr. Jones exhibited a modification of the Keeley pad, consisting of a short crescent shaped air cushion, with the usual apron. It was specially designed for operating in the perineal region.

Dr. G. Ryder, read a paper entitled

VENTRAL FIXATION OF THE UTERUS.

In writing this paper the author compares the relative value of ventral fixation and Alexander's operation, because the former operation seems to have been lost sight of by many advocates of the latter. Koeberle, in 1869, after removing an ovary in a bad case of retroflexion, sewed the uterus to the abdominal wall, and was probably the first to perform ventral fixation in this manner. Soon after this, Sims, Schroeder, Tait, and others, did the operation under similar circumstances, but it was not until within a few years that Olshausen proposed this operation, and operated for the treatment of retro-displacements of the uterus *per se*. The operation at the present time has become adopted by a large number of prominent operators, and many prefer it in all cases to the Alexander operation.

In Alexander's operation it is often very difficult to find the ligament, and after vain search the operation must be abandoned for ventral fixation. The ligaments may be so small that they will not stand the necessary tension for shortening, and the adhesions of the uterus are frequently so great that sufficient tension to draw up the uterus and stretch these adhesions cannot be produced without danger of rupturing the normal round ligament. In drawing the uterus up by the round ligaments, vascular adhesions hidden from view may be torn, and give rise to hæmorrhage which cannot be immediately detected, and results in pelvic hæmatocele. It is often necessary to open the canal of Nuck in order to find the round ligament, and this procedure must be considered attended with nearly as much risk of life as opening the abdominal cavity by a median incision.

In the Alexander operation the uterine adhesions are not destroyed but merely stretched, and retain a degree of traction which tends ultimately to bring the uterus back into the retro-position. The exaggerated anterior position of the uterus after Alexander's operation is lower in the pelvis than after the operation by ventral fixation, causes more pressure on the bladder, and often produces vesical tenesmus with burning, stinging pain. Winckel's objection to Alexander's operation is that the chief cause of the retro-displacements, the relaxation of the *retractores* (vaginal ligaments) is not corrected. From these facts it is obvious

that Alexander's operation is limited to cases of retro-displacements that are easily reduced and without adhesions, in subjects possessing a round ligament of normal dimensions, conditions which are not easily determined before the operation.

The advantages of ventral fixation over the Alexander method are, adhesions can be overcome under direct inspection, and the danger of hæmatocele prevented; the uterus can surely be brought up and maintained in the antiverted position; the vaginal ligaments are tightened, depleted, and their tonicity rapidly restored; on account of the higher position of the uterus assumed in this method there is more room for the distention of the bladder, and there is no complaint of burning, stinging pains, or dragging sensations. The objection to opening the abdominal cavity is to-day almost nothing, and although both operations have a rate of mortality it is very low, and there is no preference on this account of one operation over the other.

When pregnancy occurs after either operation there is little danger of abortion, much less than in the displaced condition of the uterus; normal labor usually occurs at full term, and the subsequent health of the patient is good. There seems to be no difference in the value of these operations in this respect. Krug has operated successfully nearly fifty times; three of his patients afterwards became pregnant, two were delivered at full term, and the other is doing well.

The writer has operated six times with perfect success. In none of these cases has there been any rectal or bladder symptoms afterwards, and in all there has been considerable diminution in the size of the uterus, and the sense of weight has been replaced by one of lightness and general well being. The patients have been free from menstrual disorders, and were able to sit up at the end of three weeks with one exception.

Kangaroo tendon is recommended for suture material because it can be buried, lasts a long time in the tissues, and causes no trouble. The writer passes his sutures on both sides, through the fundus of the uterus, including a part of the broad ligaments, and the peritoneum, fascia, and muscles forming a part of the abdominal wall.

Discussion.

Dr. G. W. Jones prefers Newman's operation for shortening the round ligaments, which differs from the usual method in that the canal of Nuck is first opened; this makes it easy, as a rule, to find the round ligament, and admits one to exert, in a direct line, the traction on the ligament necessary for drawing up the uterus.

Dr. W. S. Brown: Alexander's operation often fails because the round ligament is only rudimentary.

Dr. A. H. Tuttle: The value of kangaroo tendon cannot be over estimated in such work as ventral fixation of the uterus where it is necessary, not only to get a plastic exudate which will furnish material for the production of the desired adhesions, but to maintain this exudate so that it will not become absorbed, but will undergo connective tissue metamorphosis. This requires about three months time. In one instance he had dissected up an old wound and extracted the tendon in a softened condition, six months' after it was first buried, from a strong mesh-work of fully organized connective tissue, and in an other instance it was extracted three months after it was buried, still in a strong condition. In both these instances there were no symptoms whatever to indicate irritation of the parts.

Dr. J. C. Irish: Had formed an unfavorable impression of Alexander's operation. It was useless in prolapse, and was limited in usefulness to retro-displacements without adhesions where there was a well developed ligament, cases which can usually be greatly relieved by pessaries and other supports. As opening the abdomen is becoming less dangerous, ventro-fixation is the operation of the future.

Dr. A. K. Miller, read a paper entitled

MONSTROSITIES.

Wolf was the first to show that primitively the ovule does not contain the embryo. Saint-Hilaire and later writers believe that all fecundated ovules are identical at the outset and that some external cause, by interfering with their development, may determine the appearance of anomalies. Daresti found, by experimenting on the eggs of the chick, that physical external causes could modify the evolution of the fecundated germ, and by these means he could produce various types of monstrosities. Heredity apparently is in casual relation to the production of monstrosities, and must exert its influence on the ovum before fecundation. Maternal impression is believed by the writer to be a cause in the production of monsters. Since similar anomalies are met with in the lower animals, one writer considers that maternal impressions are very problematical. The writer found that by hatching the double-yolked eggs of the chick, curious specimens of monsters were produced, such as one chick with four feet, four wings, and one head. Monsters are divided by Saint-Hilaire into simple and composite according as the anamoly consists of the elements of one or more individuals.

Case.—Mrs. A., para, 42 years old, menstruation ceased August 17, and symptoms of pregnancy appeared September 1. On the 6th of the following May, symptoms appeared which seemed to indicate that the patient was about to be confined, but the os uteri was not dilated. On the 9th, there was a slight discharge and the os was somewhat dilated. On the 18th, pains set in and lasted a few hours. Recurrent symptoms of labor lasting a few hours occured about every seven days, in the meanwhile the patient kept about performing her household duties as usual. The os became dilated to the size of a silver dollar and when the fœtus was touched by the inserted finger it would give a spring, or leap upwards. This state of affairs persisted for three months, when, August 21, the patient was delivered of a female child that weighed twelve and one-half pounds, measured twenty-two inches around the shoulders, and twenty inches under the arms; the finger and toe nails were very long; the nose large and flattened; mouth open, the eyes four in number, two in the normal position, large and projecting, the other two situated two inches higher and at the base of a tumor composed of blood vessels and isolated portions of the brain. There was no vault to the cranium, or forehead.

When the patient was about six weeks enceinte, her insane father-in-law came into her room while she was asleep and held a lighted candle over her, causing her to awake in great fright and with mental disturbance.

The period of gestation was one year and four days.

Three years after the beginning of the above described pregnancy, August 8, 1889, the patient was again seen with symptoms of pregnancy, dating from her last menstruation of July 1. In the meantime she had enjoyed good health. Feb. 8, she had a profuse discharge of reddish brown color, amounting to several gallons, that came on very suddenly, without pain. A dead fœtus was removed which somewhat resembled the former monster except that it has but two eyes and the intestines were confined in a sac outside of the abdominal cavity. There was no cause for maternal impression.

Discussion.

Dr. B. W. Brown:—In some cases maternal impression seems to be in causal relation to the production of monstrosities.

Dr. Burt:—In a case of pregnancy near the menopause, the product resembled a jelly fish as much as anything in appearance.

Dr. Stevens:—When in Paris saw a man with three eyes.

Dr. Jones had seen one case of anomaly in a negro.

Dr. Tuttle:—In studies of the embryology of the invertebrata, he found monsters very common, and believes the lower the development of an animal, the more frequent will be found anomalies, an argument against the theory of maternal impression.

Dr. Irish:—In one family where the father has six toes on one foot, both his children, all he ever had, were born with six toes.

ALBERT H. TUTTLE, *Secretary.*

Cambridge, Mass.

American Electro-Therapeutic Association.

Second Annual Meeting, held in New York, October 4, 5 and 6, 1892.

WILLIAM J. MORTON, M.D., PREST.

THIRD DAY, OCTOBER 6—MORNING SESSION.

(*Continued from page 396.*)

Dr. Dickson asked if any of the members had found that in treating fibroids by means of a platinum sound internally and with a current not exceeding 20 milliampères, suppuration was produced. He asked this, because he had been accused of producing suppuration in this way. The patient was a small, frail woman with a large tumor, and the treatment was by Martin's method of acting successively on different portions of the endometrium. Antiseptic precautions were used, nevertheless there was a sudden and considerable rise of temperature. He had been accused of producing disintegration of the tumor, and of neglecting to provide free drainage from the cervix.

Dr. von Raitz said he formerly used currents of 70 or 80 milliampères in the treatment of endometritis, and then he frequently met necrosis, pieces of tissue being discharged from the vagina.

Dr. Goelet said that when using punctures, caustic effects were produced, and therefore necrosis. He seldom found occasion to use currents higher than 100 milliampères, and although Apostoli had been frequently credited with using very powerful currents, the speaker had noticed while at Apostoli's clinic, that the milliampèremeter he used did not register over 250 milliampères, and 150 milliampères was rarely exceeded.

Dr. Kellogg said if a metal surface of the electrode be brought in contact with the tissues, a current above 10 milliampères would produce a slough; indeed, he believed that every method which was capable of causing absorption of a tumor owes its action to the setting up of necrosis, or of a circumbed phlebitis, which cuts off the circulation in the tumor. Dr. Hutchinson's method was well worthy of trial because it avoided this necrotic action. Even the small currents used in epilation produce a visible anæmia of the tissues, and it is probable that it is in this way that Dr. Hutchinson obtains his results. By covering the vaginal electrode to the depth of three-eighths of an inch with a mixture of gelatine and white lead, more powerful currents could be used without producing necrosis. Occasionally as a result of thinning of the uterine wall by an intramural fibroid, perforation of this wall will follow the gentle introduction of an electrode, and if absolute asepsis has not been secured, trouble will result.

Dr. Massey, in closing, said he had stated that in myomata, although the faradic current produces a contraction which may prove an important aid in the treatment, there is no permanent effect produced by this current. He was glad that this point, as well as the statement that it is necessary to affect the nutritive supply of tumors, was well received by the members. He did not think, however, we need directly attack the blood vessels; possibly all that is necessary is to affect the nerve supply of the hilum of the tumor. He had employed Dr. Hutchinson's method of abdominal puncture, modifying it, however, by using stronger currents, and insulated Hagedorn needles, two and one-half inches long. The puncture was very easily made with this needle; its small size admitted of the use of a fused hard rubber insulation, and its shape allowed the puncture to close after the withdrawal of the needle. He had connected the *negative* pole with three or four such needles, and used a current of 300 milliampères. His results had been good, but not so good as from very slight punctures down near the hilum of the tumor, although this latter situation is somewhat difficult of access. He wished to take exception to the use of the word "necrosis" in the sense in which it had been employed in this discussion. Necrosis occurs not infrequently in cases which have never been subjected to electrical treatment, or to operation; hence, it is unfair to assume that any untoward action following upon the use of electricity is necessarily the result of this treatment. Cauterization is produced, but there is usually no necrosis; necrosis is a vital process, cauterization, a chemical process, and if necrosis occurs, it must be in the adjoining tissues. It is because of the profound effect of the current on the adjacent tissues, that we should be careful not to make too frequent applications, otherwise necrosis may be produced.

THE PRESENT STATUS OF ELECTROLYSIS IN THE TREATMENT OF URETHRAL STRICTURES, WITH STATISTICS OF ONE HUNDRED CASES (THE THIRD SERIES).

By Robert Newman, M.D., 68 W. Thirty-sixth St., New York, Fellow American Electro-Therapeutic Association; Consulting Surgeon to Hackensack and Bayonne Hospitals; Consulting Physician to Home for Aged and Infirm, Yonkers; Honorary Member Ulster County Medical Society, etc.

As a further contribution to electrolysis in the successful treatment of urethral strictures, there is presented herewith the statistics of one hundred more cases, as a third series, making in all, with the two previously reported by the writer and published, three hundred cases.

There are no new developments to offer, but the results of the cases now presented confirm former statements that electrolysis, scientifically applied, is absolutely successful in the treatment of strictures of the urethra.

Electrolysis rests on fundamental laws of physics and chemistry so well established, that if applied accordingly, failures in the treatment are impossible. In that sense, it is reasserted that electrolysis *per se cannot* fail, while it is admitted that ultimate success in a certain case may be prevented in different ways, namely: unforeseen complications, imperfect instruments, negligence of the operator, wrong diagnosis, and the actions of the patient. Failures consequent upon the unskilful manipulation on the part of those who are unqualified, are only the natural effects of causes, and as there exist so many such causes, it is a wonder that more failures have not been recorded. The writer has practiced this method of electrolysis successfully for over twenty-three years, and has already described the *modus operandi* and instruments, and laid down rules minutely for the operation. It is unnecessary, therefore, to recapitulate them again. The leading features for the operation being that the constant current of galvanism only must be used, always applying the negative pole to the seat of the stricture, using only weak currents of from three to five milliampères, séances lasting not more than from five to ten minutes, with intervals of about one week or longer. Only one instrument should be used at each séance, and the operation ought never

to be attempted while the mucous membrane is in a state of inflammation. The patient's strength should not be overtaxed, and gentleness prevail throughout the whole operation. As a matter of course, only the best instruments should be selected and used.

The advantages of electrolysis over other operations are confirmed by the new cases now presented, namely:

1. That it is applicable to all strictures in any part of the urethra.

2. That it will pass and enlarge any stricture when other instruments or the skill of the surgeon fail.

3. That it causes no pain or inconvenience.

4. It is devoid of danger.

5. It is not followed by hæmorrhage, fever, or any other unpleasant consequences.

6. It relieves at once.

7. The patient is not prevented from attending to his business while under treatment, and is without restraint; and

8. No relapse takes place.

The electrolytic method may not for some time become so popular that every general practitioner will use it, since it needs, beyond skilfulness, great patience, gentle touch, good instruments, and electric apparatus in perfect order, also the qualifications of a master electrician and genito-urinary expert.

Electricity, and electrolysis in particular, have had many skeptics and adversaries, but who now, in this progressive age of science and civilization, have dwindled down to a few unreasoning ones, while the converts are legion; and the status has changed to a better appreciation of the method, and is acknowledged as a success, so that scarcely any opposition or doubt exists. It seems that the enemies of the system are reduced almost to a single individual, who has resorted to such doubtful and dishonest methods in decrying electrolysis, that it assumes the appearance of personal malice, rather than a truthful and dignified scientific *résumé*. One of these ingenious methods is to throw doubt upon documentary evidence proving the success of electrolysis. In the year 1885 a physician made a written statement of a case which was published. With apparent design, after the death of this physician, and after a lapse of about four years from the date of the letter, a polite note is written to this physician by a critical adversary, asking him the date of the treatment, etc. This polite note, as was expected, was as politely returned by the postmaster, who evidently declined to assume the responsibility of forwarding it to its destination, and the investigator closed his report with the triumphant words, "the inference is obvious." At another time he reports (as his duty as an editor required), some cases treated successfully by electrolysis by an eminent physician in London, ending with the exclamation, "the burning question again!" Such insinuations and misrepresentations show very clearly on their face, without any "obvious inferences," the unworthy motives of an unsuccessful operator who, as an editor, while reporting successful operations by electrolysis, closes such reports with a captious, seemingly intended to be a skeptical and misleading criticism.

But while we have still to contend with this exceptioual case of wilful or ignorant misrepresentations, it is a pleasure that the cases which are herewith submitted confirm those already reported, and establish beyond doubt the success of the treatment. This success, summarily, is proved by:

1. Reports of thousands of successful cases by different trustworthy writers, to which the writer has contributed and published three hundred.

2. Patients who have during many years been observed, re-examined, and can bear testimony of permanent results.

3. Acknowledgments by the medical press, journals and modern text-books; and

4. Documentary evidence, which has never been concealed from those desiring an honest examination, and is always open to inspection, and can be substantiated by reference to most of the patients themselves, or to their family physician or friends.

It is a pleasure to re-affirm all previous statements heretofore made, despite adverse criticism, and to welcome an investigation of stubborn facts which do not yield to "obvious inferences," but whose convincing truth is established by honest, careful and judicious investigation.

SUMMARY.

These 100 cases, numbered 201 to 300, make 300 cases published by the writer.

In the selection of each series is a little difference. *The first 100 cases* were reported to the American Medical Association in Cleveland, 1883.[1]

The principal feature was, to show that no relapse of the malady occurred after the stricture had been cured by means of the electrolysis. As the meaning of the word "cure" may be interpreted by some differently than by others, it will be more explicit by defining the meaning, viz.: no contraction of the calibre of the urethra took place, and after the patient had been dismissed as well, to his own satisfaction, the same number of sound or catheter which was used the last time in treatment would easily pass, after a year or even many years. These 100 cases were naturally not consecutive cases, but collected from consecutive cases for the purpose, and had to meet the following conditions:

1. The patients being under treatment regularly, and for a reasonable time; 2, that they were to be discharged cured, or at least so improved that the patients were content with the result, and did not wish any further treatment or improvement; 3, they were to be cases that were heard of afterwards by reliable information; mostly by re-examination by the family physician or by myself. Some of these patients came repeatedly for such a re-examination.

The proof of no relapse was, that the same number of sound was used in the re-examination, which passed the last time at the close of the treatment, *i.e.*, if the calibre of the urethra was enlarged to a number 26 French, the same number 26 passed again after respectively three to eleven years.

The second 100 cases[2] were selected in a different way. It consisted of the experience of a later period, the narrative of almost consecutive cases taken from my note book; relating all such cases, which have remained long enough under treatment to warrant a result, and in which the necessary information has been furnished and recorded; on the other side omitting cases, which have not been long enough under treatment, or only seen without treatment, and in which the record is sufficient. In this report I have on purpose omitted the word "cured," because there is a diversity of the meaning cure. The patients were dismissed or stopped treatment themselves, when they felt comfortable and well, had a calibre of the urethra which enabled them to void freely a good large stream, and if wanted could exercise a sexual intercourse.

The result of such treatment is marked under the heading "sequel and calibre of the urethra when discharged." The number of electrodes used, is stated according to the French scale, but these (Newman's) electrodes differ somewhat from the usual steel sounds sold by instrument makers. The usual steel sound tapers, so that the end which is used in entering the meatus is from two to nine numbers smaller than the stem of the instrument, while my electrodes have

[1] Journal American Medical Association, April 25, 1885; New England Medical Monthly, August 1885.

[2] Journal of Amer. Med. Assoc., Sept. 24, 1887.

SYNOPSIS OF THE THIRD HUNDRED CASES OF STRICTURE OF THE URETHRA TREATED BY ELECTROLYSIS.

TABULAR STATISTICS.

Number.	Patients' Initials, Residence, Date of First Visit.	Age — Years.	Cause, Duration, Complications of Stricture.	No. of Strictures found.	Treatment. Distance from Meatus. Inches.	Size of Stricture. Fr. Scale—No.	How many Stances.	Average Intervals Days.	Time of.	Sequel and Calibre of Urethra when Discharged. French Scale No.	Last Heard From After Treatment.	Time of Observation After Discharge Without Relapse.
201	M. G. F., N. Y. C., 1887, March 23	49	Continued urethritis for 7 years; impotence	4	2, 4, 5, 6	12	15	10	5 mos	Urethra enlarged to No. 28	1890, March 27	3 years.
202	E. G. B., Albany, 1887, March 26	55	Strictures for 30 yrs. Prostate enlarged.	3	2½, 4½, 6½	18	8	14	4 mos	Urethra enlarged to No. 32	1892, March 30	5 years.
203	J. W. R., Oregon, 1887, March 31	35	Urethritis; 15 years; spinal irritation	3	3, 4½, 6½	11	4	5	4 wks	Improved to No. 23; left for home	1888, March	1 year.
204	E. S. E., N. Y., 1887, May	32	Urethritis; 3 years; bungling electrolysis; peri-urethral abscess	3	2, 4, 6	6	7	8	2 mos	Improved to No. 17; very little progress. Withdrawn	N.B.—Former injudicious electric treatment has injured the case.	
205	C. C. W., Chicago, 1887, June 9	48	Urethritis, character unknown, 8 yrs.	3	5, 6, 7	18	2	3	op'd while in Chicago	In two séances, enlarged to No. 23	1890, June; through family physician	3 years.
206	S. H. H., N. Y. C., 1887, July	29	Prolonged urethritis, 2 yrs. Urethrotomy	2	3, 5½	18	20	8	5 mos	Urethra enlarged to No. 32, Fr.	Re-examined Jan. 8, '89; well	2 years.
207	W. G. C., Ulster Co., 1887, July 27	23	Strong injection, 3 years	4	4, 5, 6, 7	0	15	12	6 mos	Urethra enlarged to No. 26, Fr. The limit of meatus	Heard from him and family physician; is well	4 years.
208	W. M. H., St. Louis, 1887, August 19	32	Long continued urethritis; gleet; 4 years	2	3, 4	17	7	9	2 mos	Calibre enlarged to No. 28, Fr.	Re-examined with No. 28, Sept., '88: well	1 year.
209	G. R. B., N. Y. C., 1887, Aug. 24	40	Gleet, 3 years	3	3, 4, 6½	15	8	8	2 mos	Enlarged to 26, limit of meatus. Well	June, '92, well; no relapse	5 years.
210	R. S., New Haven, 1887, Aug. 29	24	One year, prolonged urethritis	3	3, 5, 6	17	6	14	3 mos	Enlarged to 28. Normal calibre 26. Well	Re-examined Sept. 5, '88	1 year.
211	M. H. M., New Haven, 1887, Aug. 29	23	Urethritis, gleet; 2 years	2	5, 7	18	4	12	6 wks	Enlarged to No. 25 Fr., size of meatus. Married and well	Re-examined October 16, '88; well	1 year.
212	E. S. G., Tenn., 1887, March 27	42	Prolonged urethritis, 10 yrs.; prostatitis, cystitis	2	3, 5	23	8	10	3 mos	No. 27 Fr. Well	Re-examined Aug. 11, '91; well	5 years.
213	W. D. C., N. Y. C., 1887, October 2	53	Inflammation, traumatism, bladder over-distended; 5 years	2	5, 7	4	5	12	2 mos	Improved; 14; gone west	Oct. 23, '89; written that he felt great relief	2 years.
214	J. C., New Orleans, 1887, Oct. 5	27	Strong injection, urethrotomy, 2 yrs.	1	7	0	10	8	2½ mos	Enlarged to 26; gone to N. Orleans; well	Not heard from.	
215	J. M. D., Indianapolis, 1887, Oct. 19	60	Not known; enlarged prostate, 4 years.	1	5	20	3	4	2 wks	Improved to 26; content and gone home	Not heard from.	
216	D. T. H., Newark, 1886, Aug. 1	50	Balanitis; cicatrix after porotomy, 3 months	1	Meatus	18	5	7	1 mo	No. 27; well	February, '92; re-examined; well	6 years.
217	H. T., Brooklyn, 1887, Oct. 30	22	Strong injection; druggist's mistake; traumatism; 6 mos.	3	2, 4, 6	8	25	10	9 mos	No. 21; improved; temporary; failure	1890, relapse	Failure.
218	T. B., Charleston, 1887, Nov. 15	24	Urethritis; urethrotomy; 6 years	2	6, 7	20	4	7	1 mo	No. 28; well	'92, physician reports well	5 years.
219	R. W. G., Bloomfield, N. J., 1888, Jan. 30	46	Strumous inflammation; ulcers, 2 years	1	4	7	5	6	1 mo	Imp'd, 20; Dr. Wile continued treatment	'92, saw patient; Dr. Wile reports well	4 years.
220	I. T. K., Blairsville, Pa., 1887, Nov. 16	37	Urethritis prolonged; orchitis, 11 yrs.	1	4	17	6	7	1½ mos	Enlarged to 28; well	Not heard from.	
221	C. D. B., N. Y. C., 1887, Nov. 23	47	Gleet, 20 years	2	5, 6½	12	7	8	2 mos	Enlarged to 28; well	Not heard from.	
222	A. L. B., N. Y. C., 1887, Nov. 28	50	Traumatic rupture of urethra, 17 years	3	2½, 5½, 6½	20 16	7	Irregular.	3 mos	Enlarged to 28; well	Re-examined twice, Nov., '88	1 year.
223	J. R., Philadelphia, 1887, Dec. 14	35	Traumatism; bungling electrolysis, 7 yrs.	1	7	0	13	Irregular.	4 mos	Enlarged to 25; well	'90, by letter; reports well	2½ years.
224	R. J., Colchester, Conn., 1887, Dec. 14	50	Traumatic retention, cystitis, orchitis, 3 years	1	7	17	2	14	2 wks	Imp'ved to 20; could not come again	'88, July	6 months.
225	G. A. S., N. Y. C., 1887, Dec. 30	28	Gleet continuous for 2 years	2	3, 5	17	6	8	2 mos	Enlarged to 28; well	'89, February 13; re-examined	1 year.
226	Dr. J. S. C., N. Y. C., 1888, Jan. 3	47	Inflammation, urethrotomy, 10 yrs.	2	3, 5	21	8	7	2 mos	Enlarged to 32; well	Re-examined, '92; and married	4 years.
227	A. D., Greenville, N. J., 1888, Feb. 3	49	Gleet, urethrotomies, 10 yrs.	2	2½, 5½	21	5	Irregular.	3 mos	Enlarged to 30	Re-examined, Mar. 14, '90	2 years.
228	J. D., N. Y. C., 1888, Feb. 6	46	Gleet, retention, urethrotomy, 17 yrs.	2	4½, 5½	8	14	11	4 mos	Improved to 27; patient away by a surgeon	was transferred	and spirited
229	F. S. B., Hackensack, N. J., 1888, Feb. 13	23	Urethritis, 1 year	1	5	17	6	14	3 mos	Enlarged, 28; well	Re-examined, October 4, '92	4½ years.
230	J. G., Topeka, Kansas, 1888, Feb. 27	36	Urethritis, 2 years	2	2½, 5	18	2	8	1 wk	Improved, 25	'89, March, No. 25 passed	1 year.
231	R. L. C., N. Y. C., 1880, March 4	35	Strong injections, 5 years; nervous prostration and spasm	2	2¼, 6½	9	12	Irregular.	4mos	Little improved to 17; patient absented himself	'89, Intercurrent sickness; no material success.	
232	G. B. C., Montreal, 1888, March 30	54	Traumatism, prostatitis, cystitis. Urethrotomy, 7 yrs.	3	2½, 3¼, 6¼	17	7	7	6 wks	Enlarged to 25; is well	'91, by family physician	3 years.
233	A. J. S., Brooklyn, 1888, April 2	60	Unknown; cystitis, prostatitis, 10 yrs.	1	3	20	5	7	1 mo	Improv'd to 25; gone south	Not heard from.	
234	V. S. N., N. C., 1888, April 27	40	Traumatism, 10 yrs. Urethrotomy	3	2½, 4½, 5½	15	8	6	1½ mos	Enlarged to 25; gone home	'91, by letter	3 years.
235	C. H. H., N. Y., 1888, April 30	34	Gleet, prolonged, 5 years	2	4, 5	11	6	6	1 mo	Enlarged to 2-; well	'82, September, re-examined	4 years.
236	T. N., N. Y. C., 1888, May 2	39	Gleet, spasm, 8 yrs.	2	3½, 5	6	15	Irregular.		Enlarged to 28; well	'92, Jan.; re-exam'd; well; also '90 & '91.	4 years.
237	C. S., N. Y. C., 1888, May 14	70	Inflammation, retention, enlarged prostate, 6 yrs	2	4½, 6¼	17	6	10	2 mos	Enlarged to 26; capacity of meatus; well	Re-examined, Sept. 9	'89; 1½ years.
238	G. L., Florida, 1888, May 18	26	Urethritis, epididymitis, 1½ years	2	4¼, 5½	21	3	5	10 days	Enlarged to 28; gone home	Not heard from.	
239	Dr. E. H., Brooklyn, 1888, May 21	48	Gleet, 8 years	2	3½, 5¼	18	6	10	2 mos	Enlarged to 28; well	Life ins. phys. accepts and finds no	[stricture.
240	J. T. M., N. Y. C., 1888, May 19	52	Gleet, 12 yrs. Urethrotomy	3	3½, 5½, 7½	20	..	Irregular.		Enlarged to 25; well	Re-ex'd, '90, Dec. 17; '92, February, re-examined	4 years.
241	J. Z. A., Hackensack, 1888, May 26	24	Urethritis and inflammation, 9 mos.	2	3, 5	11	8	7	2 mos	Enlarged to 25; capacity of meatus	Re-examined, May 20	'90, 2 years.
242	W. A. M., Redbank, 1888, June 19	43	Strong injections; 20 years	2	3, 5	9	11	8	3 mos	Enlarged to 25	Saw patient off and on to '92; is well	4 years.

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TABULAR STATISTICS—CONTINUED.

Number.	Patients' Initials, Residence, Date of First Visit.	Age — Years.	Cause, Duration, Complications of Stricture.	No. of Strictures Found.	Distance from Meatus. Inches.	Treatment. Size of Stricture. Fr. Scale—No.	Treatment. How many Sittings.	Treatment. Average Interval—Days.	Treatment. Time of.	Sequel and Calibre of Urethra when Discharged. French Scale No.	Last Heard From After Treatment.	Time of Observation After Discharge Without Relapse.
243	Dr. R. W., N. Y. C., 1888, July 21	31	Urethrotomy; no venereal disease; 1 year	1	3½	21	2	. . . .	2 mos . . .	No. 25 passed easy .	Saw patient often; is well	4 years.
244	M. B. M., City, 1888, July 25	45	Urethritis; 10 years.	1	3½	25	8	7	2 mos . . .	Enlarged to 30; is well	'89, July 19; re-examined	1 year.
245	E. B., N. Y. C., 1888, Aug. 14	23	Urethritis; 5 years .	4	1½,4,4¾,5½	11	7	7	2 mos . . .	Enlarged to 25 . . .	Heard from off and on	3 years.
246	J. H., Rahway, N. Y., 1888, Sept. 1	28	Urethritis; 2 years; urethral abscess; cystitis	1	5	15	6	7	1½ mos . .	Enlarged to No. 28 .	Not heard from.	
247	A. C., N. Y. C., 1888, Nov. 3	34	Gleet, prolonged, 8 years	1	4¼	20	4	7	1 mo. . . .	Enlarged to 25; patient left content .	Not heard from.	
248	H. E. C., N. Y., 1888, Sept. 23	52	Inflammation; years	3	3, 5, 7	0	6	7	1½ mos . .	Much imp. to 24; patient feels too well	Not heard from.	
249	T. M., N. Y. C., 1888, Sept. 25	26	Granular urethritis, gleet; 6 years . . .	1	large calibre. also per endoscope.		Treated		Irregular	No. 27 passed size of meatus; is well . .	'91, May, re-examined	2½ years.
250	L. B., N. Y. C., 1888, Oct. 11	36	9 years; urethrotomy	1	3	25	6	15	3 mos . . .	No. 32 passed easy; is well	Re-examined, 1891, Feb. 20	2½ years.
251	Dr. A. W., Iowa, 1888, Oct. 30	37	Retention; cerebro-spinal meningitis; 12 years	1	6¼	20	4	7	1 mo. . . .	No. 28 passed easy; is well	Not heard from.	
252	R. M. C., Texas, 1888, Nov. 10	52	Urethritis, gleet; 32 years; urethrotomy	4	1½,2¼,4,6¼	21	6	10	2 mos . . .	Enlarged to No. 30; well; gone home .	Re-examined, No. 30, '91, May 14 . . .	2½ years.
253	F. S., N. Y. C., 1888, Nov. 28	24	Urethritis; strong injections; 1½ yrs.	2	1¼, 5	11	7	Irregular.	4 mos . . .	Enlarged to No. 28; well	Re-examined, October	'89, 1 year.
254	H. J., Brooklyn, 1888, Dec. 16	26	Gleet; 1 year	3	2¾, 4, 5½	6 in long	Irregular and interv		als . . .	Relapses in intervals; improv'd to 20	'90, August, seen by Dr. Waite	
255	K. B. M., Brooklyn, 1888, Dec. 29	39	Gleet; 16 years; urethrotomy	1	5½	17	5	7	1 mo. . . .	Enlarged, No. 28 . .	Not heard from.	
256	J. H. H., Troy, 1888, Dec. 29	39	Gleet, 16 years; spasm of bladder .	2	2¼, 5	13	7	7	1½ mos . .	Improved to 26. Meatus full capacity .	Not heard from.	
257	C. A. P., N. Y. C., 1889, Jan. 4	36	Urethritis, caustics; 7 months; cleatrix of meatus	2	1, 5	6	5	6	1 mo. . . .	Imp. to 25; much as meatus will permit	Dr. McLaury reports him well, '92, Sept.	3½ years.
258	G. P., West Indies, 1889, Jan. 15	33	Neglected inflammation; 3 years' congenital phymosis, with adhesions.	2	4, 6¾	14	4	5	1 mo. . . .	Imp. to 23; patient content, and went to sea	'90, June, not worse.	1 year.
259	J. W. S., Sprankles, Pa., 1889, Jan. 19	23	Gleet, orchitis; 4 years	1	6	11 23	3	10	1 mo. . . .	Enlarged to No. 30; stricture cured . .	'91, March, by letter.	2 years.
260	C. F. H., N. Y. C., 1889, Jan. 21	31	Gleet; caustics; 3 years	1	3	20	6	Irregular.	3 mos . . .	Enlarged to 28; capacity of meatus .	Re-examined last, Feb. 17, '90; well .	1 year.
261	W. E. N., City, 1889, Jan. 21	39	Gleet; urethrotomy; 9 years	2	3, 6	8	7	8	2 mos . . .	Improved, No. 25 . .	Not heard from.	
262	A. C., City, 1889, Jan. 27	44	Cystitis, prostatitis; no venereal disease; 9 months . .	3	2, 5, 8	20	6	12	2½ mos . .	Improved, No. 25 .	'90, February	1 year.
263	A. C. B., N. Y. C., 1889, Feb. 3	27	Strong injection; 6 months	1	5	13	6	7	1½ mos . .	Enlarged to No. 28 .	Re-examined, June 14; well . . .	'90, One and one-half years.
264	D. M., New Haven, 1889, Feb. 26	47	Not well known; 10 years	1	6	20	4	7	1 mo. . . .	Enlarged to No. 25 .	Re-examined Feb. 13, '92; well	3 years.
265	J. W. F., Savannah, 1889, March 2	33	Neglected inflammation, 15 yrs . . .	3	3, 5, 7	11	7	7	1½ mos . .	Enlarged to No. 28 .	Gone South; not heard from	
266	Dr. G. P. H., Galveston, 1889, March 2	36	Nervous disease; inflammation; 9 years	1	3¾	20	4	5	1 mo. . . .	Enlarged to No. 28; utmost capacity of meatus	Doctor wrote he had no relapse	1 year.
267	Dr. F. B. G., N. Y. C., 1889, March 13	44	Organic cartilaginous stricture; 24 years	2	3, 5¾	15, 0	16	8	4 mos . . .	Enlarged to No. 28; well	Dr. says he can pass 28 easy; Ju., '90, well	1 year.
268	G. M., N. Y. C., 1889, May 6	51	Gleet, 6 years	1	5	18	7	9	2 mos . . .	Enlarged to No. 28; well	No. 28, well; re-examined '91, Apr. 16.	2 years.
269	A. B., Bayonne, 1889, June 2	41	Neglected urethritis, 23 years; urethrotomy	3	3, 5, 6	5	10	Irregular	. . . .	Enlarged to 28; well and married . . .	Family physic'n reports well, '91, June	2 years.
270	C. A. A., Boston, 1889, June 29	32	Traumatism, 5 yrs .	2	2¼, 5½	20	5	8	1½ mos . .	Enlarged to No. 28; well	Re-examined, No. 28, well, '90, Sept. 20	2 years.
271	B. R., Hackensack, 1889, June 22	24	No venereal disease. Cystitis, recent . .	1	4	4	5	7	1 mo. . . .	Enlarged, No. 25 . .	Heard from	One-half year.
272	M. J. T., N. Y. C., 1889, Sept. 12	36	Strong injections; 8 years; prostatitis .	2	2, 4	14	11	Irregular	. . . .	Enlarged to 26; gone to St. Domingo . .	Re-examined July	1891, One and one-half years.
273	D. B., Montreal, 1889, Sept. 15	31	Traumatic, 15 yrs. .	2	3, 5½	6	4	5	½ mo . . .	Improved to No. 31; gone home . . .	His phys'n reported well, '91, February.	One and one-half years.
274	C. H., Croton, 1889, Sept. 20	47	Inflammation; cystitis; 10 years . . .	3	2, 4, 5	11	Irregular	and in		Improved, No. 20 .	'92, Sept. 23, reports well	3 years.
275	E. L., N. Y. C., 1889, Sept. 28	33	Strong injections; 4 years	2	2, 4½	21	4	9	1 mo. . . .	Enlarged to No. 26; is content	Re-ex. '90, Jan. 6; well	Seen 3 years.
276	Cha. H., Brooklyn, 1889, Nov. 21	48	Strong injection; 30 yrs.; urethrotomy.	2	3, 4	23	4	7	1 mo. . . .	Enlarged to No. 30; well	Re-examined April 2	1892, Two and one-half years.
277	H. S., N. Y. C., 1889, Dec. 11	20	Gleet; 1½ years . .	1	4	21	4	14	2 mos . . .	Enlarged to No. 26; endoscope, etc. . .	Friends report him well, '91, Nov. . .	2 years.
278	Dr. H. H., Brooklyn, 1889, Dec. 22	39	Gleet, 5 years . . .	1	4½	22	6	7	2 mos . . .	Enlarged to No. 30; well	Re-examined, well; '91, March	1 year.
279	J. R. P., 1890, Jan. 16	37	Strong injections; 4 years	2	2¼, 6	21	7	9	2 mos . . .	Enlarged to No. 28; well	Not heard from.	
280	E. B. D., Wisconsin, 1890, March 21	40	Urethritis; prostatitis; 2 years	2	1¾, 4¾	9	10	9	3 mos . . .	Enlarged to No. 28; well	Re-examined, April	1891, 1 year.
281	N. P. S., Woodstock, 1890, March 29	36	Inflammatory discharges; 3 years . .	2	2¼, 4½	Filiform	4	18	2½ mos . .	Improved, No. 20; gone home . . .	Prevented fr'm coming again to N. Y.	
282	E. R., Dallas, Tex., 1890, May 12	50	Inflammations; uncertain cause; 20 years; prostatitis .	1	6½	12	8	6	1½ mos . .	Enlarged to No. 28; is well	Not heard from.	
283	A. L. B., Bayonne, 1890, September	48	Gleet; 3 years; prostatitis	1	7½	17	7	8	2 mos . . .	Enlarged to No. 28; is well	By family physician, '92, March	One and one-half years.
284	J. M. L., Watertown, 1890, Oct. 9	75	Inflammation; cystitis; retention; 15 years	2	4½, 5½	17	6	At long intervals	1 year	Much improved; left for home . . .	By letter, well, 1892.	1 year.
285	L. S. W., City, 1890, Oct. 11	73	Gleet, retention, prostatic hypertrophy. 12 years	2	5, 6¼	14	4	7	1 mo. . . .	Much improved and prostate reduced .	Not heard from.	
286	J. B., Texas, 1890, Jan. 3	24	Urethritis, urethral fistula, 7 years . .	1	7	8	8	8	2½ mos . .	Enlarged to No. 28; well	Re-examined, April 15	1892, 1 year.

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TABULAR STATISTICS—CONTINUED.

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287	W. B. T., White Plains, 1891, Jan. 15.	48	Urethritis, cystitis, 20 yrs.	2	2, 7	17	12	Irregu	lar for 4 months.	Enlarged to No. 28; well	Re-examined, May 18, 1892	1 year.
288	W. H. S., N. Y. C., 1891, Jan. 22	47	Gout, urethritis, cystitis, 2 years	2	2½, 5½	17	11	Irregular	5 mos.	Meatus wont admit larger than 24; well	Seen off and on; well, '92, March	1 year.
289	T. B., Roanoke, 1891, Feb. 7	41	Strong injections, 1 year	2	2¼, 5½	22	3	5	2 wks.	Enlarged to No. 28.	Written is well, '91, Dec. 4	10 months.
290	J. P., Katonah, 1891, Feb. 25	29	Inflammation, cause uncertain, 6 mos.	1	6¾	large calibre	5	12	2 mos.	No. 28 passes easy.	Re-examined, Sept. 2, '92	One and one-half years.
291	F. H. S., 1891, March 9	46	Gleet continued 10 years	2	3, 5	17	8	7	2 mos.	27, utmost capacity of meatus; well	Not heard from.	
292	H. N. P., N. Y. C., 1891, March 31	31	Gleet, 12 years	2	2¾, 5¾	17	8	7	2 mos.	No. 28; well	Well; heard direct & indirect, '92, July	1 year.
293	J. L. M., Brooklyn, 1891, March 28	66	Rectal abscess, urethral fiutula, strong injections, 25 years	1–6	Calcareous.	Irregular.		4 mos.		No. 26, the capacity of meatus	Re-examined, May 8, 1892	1 year.
294	W. H. B., 1891, April 18	33	Urethral abscess, 5 years	1	6½	18	3	7	½ mo.	Enlarged to No. 25; much improved	Not heard from.	
295	C. D. K., S. C., 1891, May 10	33	Traumatism by instruments, 6 years; urethrotomy	2	4, 6½	18	6	16	3 mos.	Enlarged to No. 28.	Re-examined, May 22, 1892	1 year.
296	W. M. H., Chicago, 1891, May 12	80	Urethritis, 53 years; urethrotomy; perineal section	3	3, 4½, 5½	14	3	7	½ mo.	Enlarged to 23; patient gone west; much improved	Not heard from.	
297	G. A. B., City, 1891, May 23	50	Gleet, 2 years	1	6	18	3	10	1 mo.	Improved, 26; feels well enough	Re-examined, Dec. 16, 1891	7 months.
298	W. K., City, 1891, June 2	45	Urethritis, 5 years	3	3¼, 4¾, 6	21	6	14	3 mos.	Enlarged, 28; endoscope treatment	Reports well, Dec., 91	7 months.
299	W. T. C., Trenton, 1891, June 19	30	Urethritis, gleet, 12 years	1	5½	21	3	6	½ mo.	Enlarged to 28; is content	Not heard from.	
300	E. D. W., N. Y. C., 1891, Aug. 15	36	Gleet, 5 years	2	2¾, 5	17, 15	12	Irregu	lar for 6 months.	Enlarged to 28; well	Saw patient, who is well, Feb., '92	8 months.

upon the end which is used in entering the meatus, an egg shaped bulb, which is the full size given in my tables. Therefore my No. 32, is just as large as the conical steel sound No. 40 at the end.[4]

This explanation is deemed necessary to meet objections and a clearer understanding about the calibre of the urethra as stated in the statistics.

The third 100 cases differ somewhat from the two hundred published before, as this is the 100 *consecutive* cases treated by the writer, and even if treated only temporary the result is stated, regardless, whether the patient remained under treatment long enough for an expected favorable result or left for some reason before being cured. Excluded from the consecutive order were only consultations, or patients who were seen once and came for an examination or diagnosis.

Two remarkable failures are candidly acknowledged, and need some explanation. Case 204, was very bad; strictures everywhere from the meatus to the neck of the bladder complicated by urethritis, peri-urethral abscess, and made worse by former bungling electrolytic applications. The electrolytic treatment by the writer improved the urethra by an enlargement from No. 3 to No. 17. Progress was too slow, and both patient and operator getting tired of the case, I myself sent to Dr. Keyes, who afterward wrote "he cut everything," and acknowledged the severity of the case.

No. 217, came for treatment long and faithful enough, but proved an entire failure, after a certain time showing relapse, and new inflammation. The plausible causes were: the operator by over anxiety doing too much and, the patient in intervals practicing masturbation, thereby creating new acute inflammation.

Nothwithstanding these explanations for cause, the result of these two cases are failures, and are recorded as such.

Recapitulation.—The enlargement of the calibre of the urethra by the electrolytic treatment was as follows:

Strictures which admitted no instrument were enlarged from No. 24 to 28 French, respectively.

Strictures which admitted a No. 4 instrument were enlarged from No. 14 to 28 French, respectively.

Strictures which admitted a No. 6 instrument were enlarged from No. 17 to 28 French, respectively.

Strictures which admitted a No. 7 instrument were enlarged to No. 20.

Strictures which admitted a No. 8 instrument were enlarged from No. 21 to 28 French, respectively.

Strictures which admitted a No. 9 instrument were enlarged from No. 17 to 28 French, respectively.

Strictures which admitted a No. 11 instrument were enlarged from No. 20 to 28 French, respectively.

Strictures which admitted a No. 12 instrument were enlarged to 28.

Strictures which admitted a No. 13 instrument were enlarged from No. 26 to 28 French, respectively.

Strictures which admitted a No. 14 instrument were enlarged from No. 26 to 28 French, respectively.

Strictures which admitted a No. 15 instrument were enlarged from 25 to 28, respectively.

Strictures which admitted a No. 17 instrument were enlarged from No. 20 to 28, respectively.

Strictures which admitted a No. 18 instrument were enlarged from No. 25 to 32, respectively.

Strictures which admitted a No. 20 instrument were enlarged from No. 25 to 28, respectively.

Strictures which admittod a No 21 instrument were enlarged from No. 25 to 32, respectively.

Strictures which admitted a No. 23 instrument were enlarged from No. 27 to 30 French, respectively.

Strictures which admitted a No. 25 instrument were enlarged from No. 30 to 32, respectively.

The result of the enlargement of the calibre of the urethra varied according to circumstances, as necessities, wishes of the patients, time allowed for treatment, nature of the stricture, complications, general condition as occupations, vices or virtues of the patients. But results must be considered very good, even by chronic grumblers, if a calibre of a urethra can be enlarged to a No. 28 French, when at the first visit no instrument would pass, and experts have tried in vain before. In some cases the family physician had tried for weeks, in others, celebrated professors were given chances, without being able to pass any instrument, and the

[4] Journal Amer. Med. Asso., Sept. 8, 1888.

disposition of the cases were, the advice of perineal section. In some cases this advice by the family physician was accompanied by a written introduction to a first class operator, etc. In all such cases, when no medical hand could pass the stricture with an instrument, it was passed successfully by the power of the "electrolysis," which acted as a chemical absorbent, and not as a dilator, as some kind friends have suggested. If in these cases dilatation could have been used, why did the experts and surgeons not do it?

All these are facts which can be verified by reliable witnesses, and there can be no doubt that the electrolysis did the work, which could not be done by pressure or dilatation.

The duration of the strictures at the time the patients presented themselves for treatment varied from three months to fifty-three years, and in recapitulating we find:

Two cases of three months standing; three cases of six months; two cases of seven months; one case of nine months; nine cases of one year; eleven cases of two years; eight cases of three years; five cases of four years; eleven cases of five years; five cases of six years; four cases of seven years; five cases of eight years; three cases of nine years; ten cases of ten years; one case of eleven years; five cases of twelve years; four cases of fifteen years; two cases of sixteen years; two cases of seventeen years; five cases of twenty years; one case of twenty-three years; one case of twenty-four years; one case of thirty-two years; and one case of fifty-three years:

The percentage of single or multiple strictures:

	Single	Multiple	Total
1st series of 100 cases	42	58	189 Strictures
2d " " 100 "	21	79	230 "
3d " " 100 "	34	66	192 "
Average in 300 " per 100	32	67	"

We may expect nearly one-half of patients presenting themselves, having single strictures. The increase of multiple strictures in these statistics may arise from the fact that more bad cases were transferred to writer.

The *number of strictures* in one individual we find as follows:

	First 100	Second 100	Third 100	Average
1 Stricture in	42	21	34	32 per cent.
2 Strictures in	34	43	43	40 "
3 " "	17	26	19	21 "
4 " "	5	7	4	10 "
5 " "	2	1	. .	1 "
6 " "	0	2	. .	1 "

The *location of the strictures* was found in all parts of the urethra, from the meatus to more than 8 inches from it, as follows:

	—Location of Strictures in—			
	1st 100 Cases	2d 100 Cases	3d 100 Cases	Average
At meatus or less than 1 inch from meatus	8	9	1	6
At 1 inch or less than 2 inches "	12	12	5	10
At 2 inches " " 3 " "	31	24	25	27
At 3 " " " 4 " "	25	41	31	32
At 4 " " " 5 " "	42	30	35	36
At 5 " " " 6 " "	37	46	51	45
At 6 " " " 7 " "	24	40	30	31
At 7 " " " 8 " "	0	20	14	11
At 8 " or more from meatus	10	8	1	6

Situation.—The greatest number of strictures were from four to six inches, or in the first part of the urethra. In the membraneous part 15 per cent. In the prostatic part 5 per cent.

This combined statistic of 300 cases confirms the observations made at the report of the first series, that strictures appear in every portion of the urethra, about 15 per cent. in the membraneous; about 5 per cent. in the prostatic portion; some of the latter were of traumatic origin. It seems to be a mistake, to believe that there are no strictures in the prostatic portion of the urethra, and that the largest number are situated within three inches from the meatus.

Séances, intervals and time of treatment average exactly alike in all series reported. From one to ten operations, in some cases even more were necessary, from which fact one may draw the conclusion, that the average number of séances was five to six for each case. The treatment in each case averaged two to three months. Long intervals between the séances, and weak currents are rules to which I still adhere, and which I cannot impress too strongly on operators as most important points in these operations. The intervals ought to be once a week or more, but in case of necessity may be shortened; each séance lasted from two to ten minutes; I do not like to prolong it more, except for good reasons. The electric current is from three to five milliampères of a good galvanic battery, having a steady current; which is equal to from six to ten cells. Precision and measurement of the electric current are desirable, if a good galvanometer can be procured.

Observations.—The length of time patients were under observation after treatment differs widely in the the three series, for good and natural reasons. The patients recorded in the first series were under observation from three and one-half to eleven years, which is an average time to from six to seven years in each case. I have shown above the object and result of such observations; and certainly it has been proven that during years after the treatment the calibre of the urethra, when once sufficiently enlarged, or cured if you please, did not suffer any contraction. This principle or effect of the electrolysis is also proven in the second series of 100 cases, but not in such a striking degree. This is most natural for several reasons. These cases were all treated lately, within a few years. Next the cases were not selected, but reported almost as consecutive cases, as found in the note book. There is no claim, that these cases were all cured, the record speaks for itself and shows how far they were improved, or a good reason why they were not more improved. Even in this series in most cases a reasonable time had elapsed for observation, and many re-examinations have shown that no contraction of the urethra had taken place. These observations comprise a time between three months to five years, the largest percentage of observations were made from one to three years. The time of observation in the third series of entirely consecutive cases averaged two and one-third years. A small percentage of these cases were not heard from again, but as they all left off treatment, when the calibre of their urethras was respectively of a No. 25, 28 and 32 size French, it is presumable that they remained well, and that such was the reason of their non-appearance again.

The average time of observation in the three hundred cases was six and one-half years.

Correct Diagnosis.—With the diagnosis of urethral stricture in the reported cases, writer had little to do, and mostly had only to confirm such a diagnosis already made by the best known genito-urinary surgeons. Most patients were sent by well known practitioners, many had undergone already the customary procedures in all varieties, from dilatations to all kinds of urethrotomies for years by most eminent surgeons, with the result of failure. Some patients had endured several urethrotomies and were then advised to come again for another cutting as the only means. Such was the rule in the reported cases, and therefore no doubt can be entertained of the correctness of the diagnosis of urethral stricture.

In one instance No. 268, out of many others, a stricture of twenty-three years was cured by electrolysis, while treatment for years by dilatation and several urethrotomies had failed. An acknowledged authority pronounced it one of the worst strictures and advised perineal section. The patient is now married and has remained well for several years.

In the absence of the author the paper was read by Dr.

Hutchinson, but the discussion was postponed until the evening.

In response to the request of Dr. Newman that his statistics be submitted to a competent committee for investigation, Dr. Goelet was made the chairman, and Dr. Herdman suggested that two of the members of this committee should be selected from outside of the Association so as to entirely free the investigation from even the appearance of bias.

The Association then adjourned until evening, in order to give an opportunity to inspect Edison's laboratory.

THIRD DAY—EVENING SESSION.

SCIENTIFIC SESSION.

Discussion on Dr. Newman's Paper.

Dr. S. T. Anderson, of Bloomington, Ill., said he understood the author advised against the use of this method in cases of traumatic stricture, but he could report favorably on three such cases which had been treated according to this method. Last fall a man fell astride the arm of a mowing machine, and immediately after the accident he experienced some difficulty, but did not seek medical advice until last January, when Dr. Hill brought the patient to him. In three cases previously the operation had been done at one séance, and this was the plan adopted in the present case. There was no subsequent difficulty except some pain that night and the following day. The other cases of traumatic stricture occurred five or six years ago, and they have remained well ever since. Dr. Newman is an honorable man, and there is no occasion for doubting his statements about the efficacy of the treatment. The cases just cited show the success of the method when applied to cases which Dr. Newman did not even claim to cure by his method. He would probably condemn this heroic treatment, but the important point to remember is that it *succeeds*.

Dr. D. S. Campbell, of Detroit, said that in a paper which he reading before the Detroit Library Association, he had reported fifty-six successful cases of non-traumatic stricture treated by this method. There had been no relapses in the course of four or five years. He did not favor the employment of a current over 15 milliampères, for the treatment is usually followed by a certain amount of congestion, and urethral catarrh, nor would he advise a repetition of the applications oftener than once or twice a week. The electrode glides easily past strictures impassable to other instruments. For instance, in a case in which he had failed to pass a No. 2, English bougie, he had no difficulty in passing a No. 4 electrode. The secretion excited by the application may serve as a lubricant. He had read a paper before the Surgical Section of the American Medical Association, last June, on the treatment of a similar condition—strictures of the œsophagus—by this same method. In one case, owing to a stricture at the cardiac end of the œsophagus, it was impossible to pass a bougie into the stomach, and other surgeons in consultation had advised gastrotomy, yet after subjecting this seemingly hopeless case to electrolysis, with a No. 2 English bourgie passed down to the stricture, and repeating the application on the third, sixth and twelfth days, it was possible at this fourth treatment to pass the bougie through the stricture, and after three months of treatment quite a large bougie could be readily passed into the stomach.

Dr. Dickson said that the cases in which he had tried this method were very unfavorable ones, as they had been previously subjected to various cutting operations by the surgeons connected with the hospital. Of course, after such treatment there is much cicatricial tissue, which greatly complicates the subsequent treatment by electrolysis. In one case of rupture of the urethra, which had been operated upon and was convalescent, the wooden handle of an axe struck the injured part. Two well known surgeons performed perineal section, but were unable to find the urethra at all, so that when the speaker first saw the patient there were numerous sinuses and much foul discharge along with extensive cicatrices. There has been no sound passed on this man now for a long time, and he is in excellent condition as a result of electrolytic treatment. The speaker, therefore, wished to place himself on record as heartily in favor of this method of treatment in even the worst forms of stricture.

THE PHYSIOLOGICAL EFFECTS OF A MAGNETO-ELECTRIC CURRENT OF REGULAR VARIATION.

By J. H. Kellogg, M.D., Battle Creek, Mich.

In the January number of the *Archives de Physiologie*, M. D'Arsonval, assistant to Brown-Séquard, of Paris, published a brief *résumé* of some interesting studies upon the physiological effects of the alternating magneto-electric current of regular variation. The ordinary magneto-electric apparatus produces a current which varies in intensity very abruptly, as shown by the curves produced by this current by the aid of an apparatus suitable for the graphic study of electrical currents. The same is true of induction apparatus of all sorts, which are also subject to another variation from the fact that the two currents furnished by an induction apparatus are of very unequal intensity, owing to the conditions inseparable from this mode of producing electricity. The magneto-electric machine furnishes a current the force of which is precisely the same in each direction, and hence possessed of qualities radically different from those of the faradic current. D'Arsonval succeeded in constructing an apparatus capable of producing a current which, when graphically represented, gave perfectly smooth and uniform curves. The peculiarities of this current are thus described by D'Arsonval in a communication to the Academy of Sciences January last:

"In a previous communication I have indicated a general method for obtaining by synthesis the form of the electrical wave used to excite a living tissue. This curve, which I have called the 'characteristic of excitation,' shows the electric excitant from a physical point of view, and enables us to employ it always in identical conditions. The numerous experiments which I have made by the aid of this method have enabled me to formulate the following law in a simple case, such as one of uni-polar excitation: *The intensity of the motor, or sensory, reaction is proportionate to the variation of the potential at the point excited.* Since then, I have conducted a special study, from a practical medical point of view, of the electrical effects produced by alternating currents with sinusoidal variations, and I have established the following facts:

"1. By regulating the sinusoidal apparatus, one may pass through the body currents of great intensity without producing either pain, muscular contraction or chemical action. This absence of physiological action is, however, only apparent, for an analysis of the air of respiration shows that the passage of this current is accompanied by an increase in the absorption of oxygen, and in the elimination of carbonic acid gas.

"2. By gradually increasing the frequency of the alternations, energetic muscular contractions may be induced, but the contractions are infinitely less painful for equal intensity than when an induction coil is used. In these conditions respiratory combustion is considerably increased, and these currents act powerfully in modifying nutrition."

Nine years ago the author undertook a somewhat extended study of the effects produced by the various forms of electrical apparatus, employing not only apparatus ordinarily used for medical purposes, but machines constructed for use

in the physical laboratory, or other non-medical purposes. Among the various forms of apparatus experimented with was a small magneto-electrical apparatus, commonly known as a telephone generator, and used in central telephone stations for generating currents to ring the bells in the circuit. It was found that this machine possessed the peculiar property of being able to produce powerful but painless muscular contractions. The writer has had one or more of these machines in use in the sanitarium under his charge since the date referred to, and described the machine, together with some of the peculiar properties of the current produced by it, in a paper read before the Cincinnati meeting of the American Medical Association, and has, in all, made several thousand applications of the current under various conditions. The machine has been exhibited, and its peculiar properties demonstrated to many physicians, among others Dr. E. Betton Massey, of Philadelphia, in the summer of 1887, who, like others, was at a loss to understand the peculiar painlessness of this current, notwithstanding the remarkably vigorous and widely extended muscular action produced by it.

The effects of the current produced by this machine were also described in a paper upon the "Function of the Round Ligaments," presented before the American Association of Obstetricians and Gynecologists at its annual meeting for 1889.

The interesting observations of D'Arsonval, and the apparent identity of the current produced by his apparatus with that which I had had in use for nine years, led me to undertake a series of studies for the purpose of becoming better acquainted with the apparatus and the current produced by it. I accordingly had constructed an apparatus for making graphic representations of electric currents, with which I have made several hundred tracings from the magneto-electric machine referred to, and various forms of faradic machines, a few of which are herewith presented.

The uneven character of the faradic current, whether rapidly or slowly interrupted, as well as the great difference in the strength of the two currents furnished by an induction machine, is very clearly shown in Nos. 1, 2, 3 and 4, which are all furnished by an excellent Tripier apparatus made by the McIntosh Battery and Optical Company. The curves furnished do not differ materially from those produced by the currents of other forms of faradic apparatus, a number of which I have taken in the same manner.

Nos. 5 and 6 were obtained from the magneto-electric machine to which I wish to call special attention in this paper. These curves, as will be seen, correspond exactly with the curve obtained by D'Arsonval with his apparatus, (No. 6) which is an exact reproduction of the representation published by D'Arsonval in the *Archives de Physiologie* for January, 1892.

The two special and most important characteristics of this current, to which the term "sinusoidal" has been very appropriately applied by D'Arsonval, according to my personal observations are:

1. Its comparative painlessness; and
2. Its great penetrating power.

When an ordinary sponge electrode connected with the machine is placed in each hand and firmly grasped, and the machine made to rotate slowly, vigorous contractions occur in each arm in alternation, in which all the muscles of the arm seem to participate.

Placing one electrode in contact with the feet and grasping the other between the two hands, the muscles of both limbs are thrown into most vigorous muscular contraction. There is no tetanic contraction, however, as in the employment of the faradic current, and absolutely no other sensation than that of motion, unless the current is made strong enough so that pain is induced by the violence of the muscular movement itself.

With one pole placed in the vagina and the other upon the abdomen, and with the proper adjustment of the vaginal electrode, contraction of the muscles of the abdomen and of the thigh of one side, or both thighs in case my divided pole vaginal electrode is employed, may be induced, without other sensation than that of motion. The patients suffer no inconvenience whatever from the application of a current sufficiently strong to throw into vigorous action all the voluntary muscles of the lower abdomen, pelvis and upper thighs.

I have noted a number of motor points in the pelvis, by pressing the electrode upon which most powerful and extensive muscular contractions may be induced. I have often seen a patient lying upon the office table with the muscles contracting so vigorously under the influence of the current as to shake the table violently, and yet experiencing no unpleasant sensations whatever.

Applied to the interior of the stomach by means of a suitable electrode passed through a stomach tube, the current induces so strong muscular contractions as to induce in some cases nausea and vomiting. By the aid of the stomach tube the movement of liquids in the stomach, undoubtedly set up by the strong muscular contractions, can be easily distinguished.

One of the most serviceable uses which I have found for this peculiar current is for the relief of obstinate constipation. The current may be applied with one electrode in the rectum and the other over the abdomen, or applied to the upper cervical region.

The first method of application is of special service in cases in which a flaccid condition of the different muscles exists as a permanent factor inducing constipation.

The second mode of application is most useful in cases in which the condition is chiefly the result of deficient peristaltic activity. The marvelous penetrating power of the current renders it particularly efficient as a means of stimulating the excito-visceral nerves which leave the spinal cord at the upper cervical region.

A third method of great efficiency in cases of constipation accompanied by marked dilatation of the stomach, is by means of a suitable electrode introduced through a stomach tube into the stomach in combination with the rectal electrode. Patients rarely fail to experience decided effects from one or the other of these modes of application after two or three applications have been made.

An induced current capable of producing equally strong contractions is so painful as to be almost intolerable. The same is still more emphatically true of contractions produced by the induced current obtained from the Leyden jar of a static electrical machine with the discharging rods placed nearly together, or the so-called Morton current.

As a means of exercising the muscles, especially the muscles the action of which cannot be easily isolated in voluntary action, as is the case of many of the muscles of the trunk, and in cases of paralysis in which degenerated changes are not far advanced, this current certainly affords a method superior to all others. It is also of great service as a means of passive exercise in connection with rest cure, encouraging tissue renovation and reconstructive action much more efficiently than massage, which, however, may be employed in connection with it to excellent advantage. The impression made upon the patient who sees his muscles in vigorous action without feeling the slightest prickling, cramping, or other unpleasant sensations, is of the happiest sort, especially in the case of persons who have previously been "shocked" by the clumsy use of the electrical current

unavoidable through the employment of the ordinary faradic apparatus.

The effect of the current upon the sensory nerves is equally remarkable. With sponge electrodes applied to the temples, the machine being run at a high rate of speed and the current controlled by a rheostat, a most remarkable display of light sensations is observed in the vicinity of each pole, the impression being that of moving circles concentrically arranged. The appearance might be not inappropriately compared to a great whirlpool of light. Absolutely no other sensation is perceived with a current of moderate intensity. As the intensity of the current is increased by the adjustment of the rheostat, the display of light increases to a marvelous extent, and finally a light prickling sensation is experienced in the skin, which becomes painful and is accompanied by tonic contraction of the underlying muscles if a certain strength of current, which is variable with each individual, is exceeded.

I am studying the effect of the current upon the various divisions of the tactile sense, the sense of taste, the olfactory sense and the auditory sense, but am not yet prepared to publish my results. The peculiar effects of the current upon the optic nerve I attribute to its remarkable power of diffusion, or penetration.

I have found the current of very great service in connection with the application of large currents for the electrolytic treatment of uterine fibroids, as it greatly lessens the pain of the application and thus assists the patient to tolerate a current of considerable greater strength than could otherwise be borne. When used for this purpose, an additional electrode is placed upon the back, to which one reophore is attached, the other being connected with the intra-uterine electrode. If, after the galvanic current has been made as great as the patient can endure, the magneto current is turned on, the patient is at once relieved and the galvanic current may then be increased, usually from twenty to thirty milliampères. Even when the galvanic current has been increased to such an extent as to lead the patient to plead to have it reduced, the pain ceases almost instantly when the sinusoidal current is switched on.

As an analgesic, and for the relief of various illy-defined sensations to which persons refer under the common term "pain," I know of no mode of electrical application so valuable as the sinusoidal current obtained from the machine when moving very rapidly, the dose, of course, being regulated by means of a rheostat.

I do not consider myself yet fully conversant with the properties of the capabilities of this new current, as my duties are so pressing I can only snatch a moment's time now and then for experimental studies. But it has proved so serviceable in my hands during the last nine years, I feel sure no one who undertakes its use will be disappointed in it, and that it is a very valuable addition to electro-therapeutics.

My purpose in calling attention to it at this time has not been to present a claim for priority in discovery, as my failure to make a careful physiological study of the current until after attention had been called to it by D'Arsonval, clearly entitles the latter to first credit for placing this new therapeutic agent in the hands of the profession, but I did observe the special nature of the current and have made use of it for nine years, and have publicly called attention to its peculiar properties on several occasions.

I ordered some months ago from Gaiffe, of Paris, a machine made after the model of D'Arsonval's, but received from him a reply that the apparatus had not proved as satisfactory as at first hoped, and that he was engaged in experimental researches with a view to improvements which would be embodied in the new model as soon as completed.

The apparatus constructed by D'Arsonval is quite different in design from the one which I employ, but the effects seem to be the same. The machine was originally made for ringing the bells on long circuits connected with the central telephone station. The two machines which I have in use I obtained from the Western Electric Manufacturing Co., Chicago. In reply to an order for additional machines which I sent them recently, I learn that the apparatus is no longer in use and is not manufactured. By the aid of an excellent practical electrician in the employ of the institution of which I have charge, I am experimenting with different forms of apparatus designed with reference to simplicity and the production of a current of the greatest possible degree of uniformity in the increasing and decreasing of the current in each direction. The purpose sought is to produce a current which, when graphically represented, will present a smooth curve without break or irregularity, but an alternate swelling and diminution in opposite directions, the change in the direction of the current being effected at the instant when the zero point is reached.

The device by which the graphic representation of electric currents is secured is sufficiently unique to be worthy perhaps, of a brief mention. The idea of the device is in part borrowed from that of D'Arsonval, although the method of securing the record is substantially different. It consists:

1. Of an electro magnet so arranged as to form an annular field, in which a solenoid of delicate construction is made to move to and fro by an alternating current. By connecting a delicate lever with this solenoid in such a manner that the solenoid acts upon the short end of the lever, the end of the long arm may be made to inscribe its movements upon a rotating cylinder covered with smoked paper. I find this arrangement much more sensitive than that of D'Arsonval, in which the solenoid acts upon the rubber diaphragm of a transmitting tambour, from which the movement is communicated to an ordinary recording tambour of smaller size.

For the perfection of this instrument I am much indebted to the ingenuity of my electrician, Mr. H. A. Dow, whose previous extensive experience as superientended of an electrical manufacturing establishment for a number of years, eminently qualifies him to devise ways and means of overcoming mechanical difficulties in the construction of special electrical apparatus.

I hope to be able to present soon, a new apparatus for the production of a sinusoidal current of an eminently satisfactory character.

I ought perhaps to mention also, some studies of the alternating current employed for arc lighting in cities. I find this current to give a smooth and uniform curve, which I believe to be truly sinusoidal, although the rate of interruption is so great that the curves are small and hence their form cannot be so accurately studied. I am devising means to increase the delicacy of my recording apparatus which I trust will enable me to determine certainly the exact form of the current. The properties of this current are certainly similar to those of the sinusoidal current. The peculiar painlessness of the current, as compared with the ordinary constant current, is certainly most remarkable. I find that it also possesses decided anæsthetic properties. Testing the tactile sense before and after the application, I found the sense of locality diminished 100 per cent. as tested by the æsthesiometer. The time required for the perception of a tactile sensation was found to be doubled. I believe this current possesses most potent and physiological properties.

Discussion.

Mr. Carty wished to call attention not only to the impor-

tance of the new medical features of the paper, but to the fact that the author's observations were based on tracings showing all the elements of the current. It would only be necessary to send these tracings and a description to Mr. Kennelly, for example, and he would be able to make an apparatus which would give just these results; these tracings are fully as exact as chemical formulæ. There is no electric current which cannot be represented by the graphic method, and if this method were better understood there would be less misapprehension about many points in electrical science. It is not sufficient in recording one's observations to simply state the ampèrage, for a milliampèremeter can be constructed which will measure an alternating current.

The President said that ten years ago he described the physiological effects of an oscillatory current derived from a franklinic machine, and they were very similar to those described in this paper. He had frequently demonstrated the fact that while a current from an induction coil sufficient to cause flexion at the wrist causes much pain, this oscillatory current would produce powerful muscular contractions extending up to the shoulders without any pain whatever, and indeed a numbing effect would be observed. Recently, he had observed still another current from the franklinic machine. We are now working with the object of producing the maximum effect on the motor nerve and the minimum effect on the sensory nerve, and when we succeed in this, we shall be able to accomplish many things which are now impracticable. At present our applications are limited mainly by the pain produced, or by the destructive effects of the current on the skin. He hoped to be able to present his apparatus at the next meeting of the Association.

THE CONSTANT CURRENT IN GLAUCOMA AND CATARACT.

By Dr. S. T. Anderson, Bloomington, Ill.

Mr. President and Members of the Society:—Ruskin has said "Facts are homely things, but what the world wants at present more than it wants anything else is downright facts."

With these I come to you, and though I shall clothe them in plain attire, I trust I shall not thereby wholly divest them of attractiveness.

On the contrary, let me hope to contribute a mite to the sum of knowledge which incites us all to further careful and profitable investigation.

I will briefly speak of three cases in the order in which they came to me, and allude incidentally to one not my own, but knowledge of which led me into this line of experiment.

Case 1.—In August, 1885, a lady aged forty-five came to my office weeping and nearly blind. Her glasses were no longer serviceable and she had sought an oculist for the purpose of obtaining better lenses. On examination he found cataract in both eyes, and fairly well advanced. He informed her that there must be further progress of the disease and then removal of both lenses.

She came to me asking me to try electricity, and I consented, telling her I could possibly mitigate in some measure the unpleasant head symptoms accompanying her ailment, but could promise her no more.

Mild galvanization did this, but during the first few days of treatment I remembered that an acquaintance in Decatur, Ill., and a partner of his in Chicago, were claiming to have done some wonderful things, among which was the cure of a case of glaucoma which two of Chicago's good oculists had considered incurable. I at once wrote to the person said to have been cured, asking as to the genuineness of the published testimonial, and I read to you now from his letter to me:

125 STATE ST., CHICAGO, ILL., Aug. 25, 1885.

Dear Sir:—The above (his printed testimonial) is true, except my eyes have not been so strong as they were before the affliction, but are pretty strong by taking care of them, which I assure you I try to do. The cure was a great success, etc.

His letter to me was written about eight years after treatment—certainly a sufficient time for a test—and during these years he operated one of the finest photographic establishments in Chicago.

His letter gave me hope and I communicated with my patient's brother, who earnestly insisted on an experiment being tried in her case. I purchased the special batteries which were to be worn over the eyes for one or more hours twice daily, and began treatment, obtaining much comfort for her during the first few days, and later she claimed to have better vision, but whether real or imaginary I could not tell. Not being an oculist, I now conferred with the the one consulted by my patient. As he had made diagrams representing the stage of disease at his first examination, I had him make new drawings, and they showed fair improvement which was supportive of the patient's statements.

The treatment was continued for six weeks, and I again sent her to the oculist, whose drawings now indicated marked improvement in both eyes. The patient also affirmed that her vision was decidedly better. From this time the treatments were of shorter duration, and later but once daily, with continuous improvement. The result is that for more than six years she has been and still is wearing with satisfaction the glasses which she thought had failed her, and whose supposed faultiness led to the discovery of her true condition.

I ought perhaps to say that for about twenty years prior to her treatment by me, and for some time subsequent to restoration of sight, she had serious nervous disturbances which were much helped by the electric treatment, and finally entirely subsided under use of zinc phosphide and nux vomica. She is now in good health and has good vision.

Case 2.—In January, 1887, Mr. D., aged forty, came to me, having been afflicted with sore eyes for nineteen years. Beginning with granular lids, the disease finally caused opacities and the condition which oculists pronounced glaucoma.

When he came to me he had been totally blind in one eye for four years, with total blindness of the other eye for four months and previous to this at intervals during a year or more. The lids were indurated and swollen; so rigid as to remain open while he slept. Surely an unpromising case, but he was anxious to try the experiment, and I was willing though not hopeful.

His general health was good. I began at once with the mild currents which the eye batteries afforded, early relieving pain and materially reducing the inflammation. At first he had two daily séances of about two hours each. In two weeks he told me he could observe dimly the outlines of the court house as he passed on the opposite side of the street, and later he could observe the time by the town clock as he sat at my office window, on the corner diagonally from the court house square. One day on coming into the office, I found him waiting for me, having come alone. Beside him on a slate I saw the word "dynamite" written. On inquiring if he knew who had written it, he told me he had just tried to write a word. Observing that he had not dotted the i, I asked him to try that for me, and he placed the dot at the first effort.

Lest I weary you, I will quote his letter of May 2, 1887:

"I am able to go where I choose without help, can recognize my friends and read medium type under favorable light, and much smaller letters if on a dark background

. . . To say that I can, with the eye which was blind four years, find my way about town, does not tell all the truth, as I can read some types with it and can distinguish colors."

After this he conducted a restaurant in a neighboring town for a year or more, then came back to Bloomington in the employ of the street railway company, and finally went to the South from whence he came and was lost to observation.

Case 3.—Miss E., aged 12. This patient was placed under my care by a reputable oculist October 4, 1886, and I last examined her April, 1887.

The patient had complained much of headache and poor vision for a long time, until at last the father sought help for her. She could still distinguish some objects near by and could give the time indicated by an ordinary clock dial at a distance of two feet. She had cataract in both eyes.

I could not keep her in the city and was obliged to allow the parents to apply the batteries at their home near a neighboring village and to give me an occasional visit. She grew quite restive under the treatment, being obliged to wear the batteries for two or three hours each day, and the treatment was not satisfactory to me in some respects. Nevertheless, my friend the oculist and myself would make examinations during her visits to me, and he made drawings and kept measurements of visual distance gained. This was pleasing to me. When she finally passed from my care she could read the indications on the city clock, a distance of at least four hundred feet from my office, could see the children playing at school, a good fourth of a mile from her home, which was on elevated ground, and could readily observe the time indicated by a watch dial at a distance of fifty-seven inches.

I have not had the privilege of an examination since April, 1887, but recently I saw her in the city, wearing glasses (she was somewhat astigmatic) and visiting the stores quite independently. The disease therefore must have been mastered, or its progress stayed at the stage of improvement above indicated. In either case the results were worth obtaining. I put it as modestly as I can.

Let me now briefly detail the method of treatment. My title indicates the galvanic current, but it is also a very mild current applied for a considerable time by special forms of batteries which I will show you.

The patentee claims that a current of peculiar quality is generated by them, but whether this is true or no, I cannot say. Certain it is the current is soothing, that it controls pain and inflammation and may, if needful, be applied continuously for hours, which is not true of any other electrical appliance of value known to me. I have had them adjusted over the eyes alone or additional ones at the cerebro-spinal juncture, relieving pain and irritability and inducing restful sleep of several hours' duration. In like manner they are used in affections of the eyes.

Herein is a most practical exemplification of the saying: "It is the mild power which subdues." Strong currents, besides causing pain, destroy the delicate tissues, while this mild force seems to produce gentle electro-chemical changes whose sequalæ are improved nutrition; restored functional activity; health.

Discussion.

The president said he could not comprehend the construction of the battery, and he asked some of the electrical experts to express an opinion as to the direction of the external circuit.

Dr. Anderson said he only knew there was a current by the effects produced, chiefly by the relief of pain.

Dr. J. A. Cutter remarked that it was just such questions as these which demonstrated the need of such an Association as this. He then referred to the case published by Knapp, in which he removed one eye for malignant disease, and the disease returning in the other eye, the patient went to an electrical quack, who cured her.

Mr. Carty, speaking for several of the experts who had examined the battery, reported that the metallic case "short circuited" the cell. The current which such a cell could generate would be exceedingly feeble, but by this "short circuiting," it would be reduced to infinitesimal proportions.

Mr. Carty thought the heat radiated from the case would be greater than that produced by any electro-chemical action in the cell, and that therefore, the effect on the patient would be a diminution of temperature. Any conductor connecting points having a differential of potential will experience a flow, and the parts may be of any shape or length, and there may be any number of paths, the current dividing and passing over these paths in a ratio inversely proportionate to the resistance of the path; but in the present instance, the available current would be inappreciable.

Dr. Gunning saw a similar battery quite recently, which was about the size of a blacking box. It contained zinc, blotting paper, and some salt, and it generated sufficient current to run a toy motor.

Dr. Nunn said that in the treatment of these cases, the element of pressure might have a possible value. The effect of "suggestion" could be excluded because of the record of optical measurements. If this battery does really have a useful effect, then it is time we should take up again "the electropoise" and similar contrivances, and subject them to investigation.

Dr. Anderson, in closing, said that he did not pretend to demonstrate the presence or absence of a current; he did know, however, that when applied in the manner described, the apparatus had produced an effect similar to that observed with mild currents of electricity. He did know positively that the cases treated were really cases of cataract, and that they had been examined by reputable oculists before coming to him for treatment, and also that no other treatment whatever was employed, and that the diagrams taken from time to time, indicated improvement. The cases shown no signs of relapse, and it is now six and one-half years since one of them received the treatment. He could not explain these facts; he could only vouch for their accuracy. Other cases than his own had been reported from time to time by persons whom he knew personally to be reliable parties. He would be glad if his paper awakened sufficient interest in the subject to bring out further investigation.

BOOK REVIEWS.

TRANSACTIONS OF THE THIRTEENTH ANNUAL MEETING OF THE AMERICAN LARYNGOLOGICAL ASSOCIATION, held in the City of Washington, D. C., September 22, 23 and 24, 1891. New York: D. Appleton & Co. 1892.

Although it is rather late for these Transactions to appear, the character of the contents will induce the reader to forgive the oriental slowness of its publication. The society consisted of fifty members, over one-half of whom attended the meeting.

Dr. Bosworth's paper on asthma provoked an animated debate. He believed that the principal exciting cause of paroxysms was some nasal abnormality and not any diseased condition of the bronchial mucous membrane. He does not believe in the old theory that spasm of the bronchial muscles has anything to do with the production of

asthma. There was great divergence of opinion regarding the pathology of this disease, but the majority of the speakers favored the neurotic theory, and nasal operations in cases of well defined points of irritation. None of the disputants referred to the fact that operations in the nose have developed asthmatic seizures of a severe type, although at least one of the speakers is known to have experienced such a misfortune. While it seems to be natural for specialists to magnify the importance and results of one-sided treatment, it cannot be denied that the nose burners have opened up many a profitable field of labor. If it were not for the disposition of the essayist's critics to go back of the returns, the array of successful cases reported would appear to establish the necessity of intra-nasal operations to the cure of asthma in a large majority of instances—Bosworth says in nineteen out of twenty.

Another discussion of a topic of importance to the profession in general followed Dr. J. Solis-Cohen's paper on the symptoms and pathological changes in the upper air passages in influenza. The paper and its discussion evidenced the studiousness and painstaking habits of observation of the participants. The reader will naturally wish that the discussion had been supplemented by one on the treatment of influenza.

The tendency of specialists to ignore causes of suffering that lie without the conventional limits of their own narrow fields of work is tragically illustrated in the discussion of Dr. Rice's paper on enlargements of the epiglottis. Dr. Mulhall related the experience of a St. Louis lady who had an unyielding irritable cough. "She went abroad and consulted a prominent laryngologist, who pronounced the cause of her cough to be a distorted and enlarged epiglottis, and cauterized it. Following this there was much irritation of the epiglottis, and swelling with more cough. This lady died with pulmonary tuberculosis. She told me that the prominent laryngologist did not examine her lungs once." Immediately after the paper we find the Fellows discussing scrofula, and putting themselves on record as estimating at its full value the need of studying constitutional conditions and treatment in affections of the upper air passages. In this connection Dr. Solis-Cohen defined in a most eloquent manner his conception of scrofula in contradistinction to syphilis and tuberculosis. Such breadth of thought and elegance of diction rarely adorn extemporaneous discussions of medical subjects.

TEXT-BOOK OF OPHTHALMOLOGY, by DR. ERNST FUCHS, Professor of Ophthalmology in the University of Vienna. Authorized Translation from the second enlarged and improved German edition, by A. DUANE, M.D., Assistant Surgeon Ophthalmic and Aural Institute, New York. Numerous illustrations: pp. 788. D. Appleton & Co.

This excellent work of Prof. Fuchs needs no commendation from us.

Since the first German edition appeared, we have considered it one of the best text-books on ophthalmology ever published.

The clear, concise and pleasing style of the author has not suffered at the hands of the translator, and English readers are to be congratulated that Dr. Duane has presented to them, so accurately and so well, this valuable work.

The chapters on the external diseases of the eye show the work of a master mind, and in treating of disease of the conjuctiva and cornea, Fuchs is at his best. The classifications of affection of the cornea into suppurative and non-suppurative keratitis is based upon pathological ground and is certainly satisfactory.

Especial attention should also be called to the discussion of the theories of glaucoma and the different varieties of that condition, which constitutes a chapter that every student of ophthalmic science will read with pleasure.

The intricate subject of the action of the external muscles of the eye and the determination of paralysis of them, receives new light from his treatment.

The third, a small part of the work deals with the anomalies of refraction and accommodation, while the fourth part is devoted to a description of operations. To this Dr. Duane has added some interesting and important material, and contributed some illustrations of instruments, etc., that certainly improve it.

The arrangement of the text so that the most salient points of the subject are presented in large type, while theoretical discussions and the more intricate matters appeal strongly to the student who uses this as a text-book.

While the illustrations are not as well executed as those of the original work, they are all there, and we can repeat that we know no better book on ophthalmology.

ON THE CHEMISTRY AND THERAPEUTICS OF URIC ACID GRAVEL AND GOUT, being the Croonian Lectures for 1892. By SIR WILLIAM ROBERTS, M.D., F.R.S. London: Smith, Elder & Co.

It is a pleasure to us to learn that the Croonian lectures of Dr. Roberts have been published in book form. Not in years have we had such a clear and concise description of the gouty and uric acid diathesis as is contained within the covers of this little book. Not only does it contain a brief reference to the work of others, but it is replete with the original work of the writer, and while we cannot say that the author has found out all that there is to be known on the subject of uric acid and gravel, he has wonderfully advanced our knowledge of these conditions. We regret that the space at our disposal is not sufficient for an extended review of the arguments and views advanced, for to present them adequately would necessitate the reprinting of the entire book. Therefore, we can only commend it to our readers with the general statement that we believe it should be read and digested by every practicing physician.

SYPHILIS AND THE NERVOUS SYSTEM. By W. R. GOWERS, M.D., F.R.S. Philadelphia: P. Blakiston, Son & Co. 1892.

The profession are indebted to the American publishers of Dr. Gowers' Lettsomian lectures for presenting them in a more accessible and attractive style than when they first appeared three years ago in the pages of the *Lancet*. At that time they were extensively read and commented upon, for the most part favorably. Dr. Gowers has added some unimportant matter to bring the subject up to date.

We can only repeat what we have said before, that the work contains about all that is practically known of the relation which syphilis bears to diseases of the nervous system.

MOTHER AND CHILD. Part I. Mother. By EDWARD P. DAVIS, A.M., M.D. Part II. Child. By JOHN M. KEATING, M.D., LL.D. Philadelphia: J. B. Lippincott & Co. 1893. $2.50.

Part I occupies 76 pages and Part II 381 pages, exclusive of a well arranged index. The book covers a wider range of subjects, and is far more comprehensive in its treatment of them, than the modest and attractive title suggests. The idea of the authors is "not to supplant the physician, but to supplement his advice, and render intelligible those matters that mothers and nurses find difficult to understand," and to make intelligent action possible in emergencies when the services of a physician are not at hand. Minute directions are given for the care of the pregnant and parturient woman and for the child. The preparation of the infant's food, sterilizing milk, care of nursing-bottles, selection of wet-nurse, prevention of sickness and deformity,

are exhaustively dwelt upon. It goes into the subjects of public hygiene, surgical emergencies—ventilating, heating, lighting, foods, poisons and their antidotes, gymnastics, etc.; —diseases of children and affections of the nose, throat, ear, eye, etc. The latter subjects are presented in the form of articles written by specialists. Indeed, a large portion of the book consists of quotations from excellent writers, and this fact enhances the value and authoritative character of the work. Some of the quotations from other books are quite extensive, twelve and twenty pages long. One fills twenty-six pages and another sixty.

The following are among the writers referred to: D. F. Lincoln, A. Jacobi, C. A. Earle, S. S. Adams. C. W. Dulles, Mathews Duncan, C. F. Folsom, H. Knapp, A. W. MacCoy, A. V. Meigs, J. L. Smith, C. S. Turnbull and L. M. Yale.

No one will be likely to entertain any suspicion of plagiarism against Drs. Davis and Keating—they generally give due credit for authorship in every quotation. There is opportunity for culling and condensing with profit to the book. The two authors invade each other's territory, and the same material is worked over with unnecessary repetition.

If mothers and nurses seek the kind of knowledge they ought to possess they will find it here. There is a great deal of information that is usually written for educators particularly, but the mother ought to be an educator. There are minute directions for the tender care of patients that will rarely be followed by the middle classes. For example, it will hardly be convenient for most ladies who happen to become pregnant to hie themselves to the orange groves of Florida in severe winter, or to the cooling breezes of the northern resorts in summer, or to surround themselves with the paintings and statuary of the great masters and appoint all their surroundings with artistic beauty and harmony, in order that the coming event may be a Venus or Apollo Belvedere.

HAND-BOOK OF INSANITY FOR PRACTITIONERS AND STUDENTS. By DR. THEODORE KIRCHHOFF, N. Y. Wm. Wood & Co. 1893.

To the bibliophile there are no bad books, some books are better than others; with this dictum in mind we have sought earnestly within the covers of this book for something to commend. The name of the translator is not on the title page, it is probable that he has some entrance into psychiatry and therefore did not care to have his name appear. The translator has done his work well, but it is to be regretted that he has wasted his talents on such a poor book. To the publishers alone therefore, must we charge the foisting of this book on the American profession.

The writer devotes the first portion of the book to the cause, symptoms, course and diagnosis of mental disorders. A few of these chapters are fair, but some of them, notably the first on the anatomical basis and the location of mental disturbances are obscure and badly arranged.

It is in the last half that we find the most glaring deficiencies. The author divides all mental disorders into two classes, first, simple mental diseases that included melancholia, mania and periodical forms of these, also paranoia, which he divides into wahnsinn, verrueckthеit and confusion. The second group includes mental disorders associated with permanent anatomical changes in the brain and includes dementia, senile dementia, paralytic dementia, and "other forms." Also the mental changes associated with epilepsy, hysteria and neurasthenia, and mental disorders due to poisons. The illogical nature of the classification adopted seems to have dawned on the writer, for he says, (page 258) "We have heretofore discussed functional disorders which are *probably due to chemical changes in the nervous substance.* After long duration and great violence these may lead to permanent and anatomical tissue changes and hence we meet with some of the terminal forms of the functional psychoses in the present section. This classification is an artificial one, *especially when we must here describe diseases without anatomical change merely because the clinical history is identical with that of allied conditions in which anatomical changes are very distinct.*" (italics ours). Could there be any stronger demonstration of the fact that no classification other than a clinical one is justified by our present knowledge of mental diseases? The writer of this review does not believe that we shall ever have a satisfactory classification of mental disorders. But if one is attempted it ought at least to include some of the best demarcated clinical groups of the last twenty-five years. It is much the same as though a writer should refuse to describe disseminated sclerosis of the spinal cord because it could not be included under either diseases of the grey or white matter. Hebephrenia is mentioned but is not accorded the dignity of separate description. Katalonia and delirium grave are conspicuous by their absence. No doubt a careful reading would reveal further defects, but it would only be a waste of time.

LECTURES ON MENTAL DISEASES. Designed especially for medical students and general practitioners. By HENRY PUTNAM STEARNS, A.M., M.D., Assistant Superintendent of the Hartford Retreat. Philadelphia. P. Blakiston, Son & Co., 1893.

In a general way, Dr. Stearns has produced a very excellent work on mental diseases. It is in the form of lectures, but is by no means colloquial in style. The writer shows a wide acquaintance with the literature of the subject, and exhibits a thorough, practical mastery of psychiatry.

The first lecture deals with the physical basis of thought and is devoted to a concise outline of the anatomy and histology of the nerve structures. It forms an excellent introduction to the special study of the subject.

Lectures two, three, and four deal with the subjects of hallucinations, illusions, imperative concepts, insistant ideas and delusions. On the whole, this is one of the best statements in the book and gives the clearest idea of these subjects that we have seen stated recently. Then follows an excellent consideration of the general principles involved in the classification of mental disorders. The author in the main adopts a mixed classification, although in some respects he adheres too much to the etiological views advanced by Skae.

The chapters on melancholia and mania, circular insanity and dementia are excellent, as well as those dealing with general paralysis, alcoholic and epileptic insanity. He discards the term, paranoia, preferring primary delusional insanity. In the main the statement of this condition is good, but he neglects to draw a distinction between wahnsinn and verrueckthеit. We hardly think that the symptom-group of insanity of the puerperal period, insanity of masturbation, climacteric insanity, and insanity of lactation, will meet with general acceptance at this time.

The work closes with a most excellent account of delirium grave, or the typho-mania of Bell. The work is clearly written, concise, and accurate in detail, and some portions of the subject are treated in a manner better than we have found in any English work on this subject. It forms a most creditable addition to the American literature of psychiatry.

TURPENTINE in typhoid fever is coming more and more in favor with the newer generation, though with many older practitioners it has been the drug upon which the greatest reliance has been placed. Wood regards it as invaluable where, in convalescence, symptoms point to slowness in healing of the ulcers, or where, in the second week, there is decided tympanites.—*Medical Record.*

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SATURDAY, APRIL 15, 1893.

THE REVISED CONSTITUTION AND BY-LAWS.

At the last meeting of the American Medical Association, there was a feeling among the members of very general satisfaction, which arose from the belief that unusual progress had been made in the way of making the organization a more scientific body than formerly.

The several Sections were so constituted as to have a separate autonomy of their own, which practically made of each one a specialty society, having particular attractions for those members of the profession who are interested in special work.

The original organization of the Association partook of the character of a convention, the annual meeting being constituted of delegates from State and local societies, medical colleges, hospitals and other public institutions with which physicians were professionally identified.

After a good number of years, it was found necessary to limit the organization to delegates from regularly organized State and other local medical societies. During these years, the annual volume of proceedings was published in book form, and issued to those members of the Association who paid their annual dues. These conditions were in accord with the requirement of the times when they existed.

Ten years ago it was felt that a needed change must be made in order to insure continued prosperity, and the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION was established, and made to take the place of the former volume of transactions.

As to the wisdom of this action there can be no question. THE JOURNAL not only became an exponent of the best thought and scientific work of the delegates to the annual meetings, but it also became a bond of union between the several State medical societies.

With the wonderful improvements made in the way of rapid transit facilities from and to all parts of our vast country, at the end of THE JOURNAL'S first decade, there has developed another demand for a change in the working plans of the Association, or there will be an actual falling back instead of a forward movement of the organization.

This was provided for last year in the appointment of a committee on revision of the Constitution and By-laws. This Committee appreciated the weakness of the former convention delegate system, and in their report provide for admission to active membership in the American Medical Association of every member of an affiliated State society. This provision will have a grand effect in the strengthening of the State societies. In turn the officers of the State societies should vie with each other in their efforts at inducing every physician within their ranks to become individually identified with the American Medical Association.

This may be brought about through the use of a little tact in directing attention to the rights and privileges of such membership in the National organization.

Furthermore, this is the only possible avenue through which to reach a practical unification of American physicians in one organization. Ten years ago very few of the States had a State Board of Health, or in any official manner recognized the necessity for such a wheel in the body politic of the State government. Now, almost every State has its State Board of Health. Five years ago there was scarcely a single State Board of Examiners for physicians. Now there are several and the number is increasing very rapidly.

Ten years ago there was not a Chamber of Commerce or Board of Trade that appealed to the medical profession for protection from disease and accompanying disaster. To-day, every such commercial body, including financiers, manufacturers and miners is anxiously looking to the medical profession for promises of fair sailing for their peculiar and distinctive crafts. There is not a business man in the whole United States of America who is not eagerly watching his daily paper to see what action is being taken by the convention of Health Officers that is in session in New York.

Banking institutions in the chief monetary centres are arranging their loans on the expressed opinions of their medical advisors. Such conditions never before existed.

Two years ago the American Medical Association and nearly all the State societies petitioned Congress to enact a law creating a Cabinet Officer of Public Health. This petition was unheeded. August Senators and voluble Congressmen argued with the most learned physicans of our country that such an officer was not needed. A severe fright last fall

caused these same solons to revise the quarantine laws, but weakly placed their execution in the hands of the Secretary of the Treasury. What would be thought of a proposition to make the president of one of the Chicago banks, the city health officer. There is just as much sense in the one as in the other.

If there is any one thing that is more than another an outgrowth of this decade, it is the division of labor in order to obtain the greatest possible skill. This pertains to every line of business and professional work. So it is that physicians must have a representation in person in the National, State and municipal governments. Their natural positions cannot be satisfactorily filled by lawyers, bankers and mariners.

Congressmen are being educated by their constituents and at their next meeting they will evince some of their new learning by a more favorable consideration of the necessity for a Cabinet Officer of Public Health, who should have the official support of a National Board of Health, constituted of eminent physicans. Such a wheel in our Nation's government is as much of a necessity as that of Law, Interior, Agriculture or any of the other departments.

What has all this to do with the revision of the Constitution and By-laws of the American Medical Association? Very much. The revision will have a powerful influence in bringing about a unification of American physicians in one organization, and this will enable the profession to act with very much greater force than when there is a more seeming independence and individuality of action.

To obtain deserved recognition, standing and support, there must be a unity of action.

THE STATE MEDICAL SOCIETIES.

These organizations are of the utmost importance to the whole medical profession, and should number in their membership lists the entire roll of practitioners of rational medicine in every State.

It is in the State society meeting that the professional standing and character of the physicians of a given State are determined. It is there that the scientific attainments of the individual are exhibited to the best advantage. It is in the State society that an esprit de corps is established and maintained, which signifies the degree of elevation in tone of professional morals that has been attained. It is from the State societies that suggestions for needed legislation must come, whether this be for the purpose of preserving the health of the people by the enactment of a code of sanitary laws, or of laws which look to the same end through the control and legal protection of a well educated medical profession.

Nearly all of the States have enacted laws creating Boards of Health, some of which embrace clauses regulating the practice of medicine, and require a registration of physicians in the office of a county official.

This is all right, and to which there should be no objection on the part of physicians, but inasmuch as the State imposes these legal restrictions it should go a step further and make of the registered and otherwise legally qualified physician, a recognized sanitary officer of the State. This official relationship and responsibility should be made similar to that now existing between practicing attorneys and the State. An attorney in order to have a legal right to practice his profession in any court must first pass an examination by an examining board. This being done he is registered by the clerk of the court, and at once becomes an officer of the court and State, and is liable to receive official instructions from the court.

An official relationship of physicians with the State is of interest equally to the people and to the medical profession. It is in fact a pertinent question that may be placed for solution, alongside of some of the important sociological problems of the day.

The State, and the people who constitute the State have come to regard the practice of medicine as an occupation largely pursued for philanthropic purposes, which comes about through the giving of gratuitous service to all public hospitals and charities. This line of professional work, although Divine in character, has worked and is every day working irreparable injury to practitioners of the healing art. Compensation in the way of experience, should not be accepted as an equivalent remuneration. Our legal brethren are more materialistic in their practice for the benefit of the State. When called upon to defend a miserable, poverty stricken citizen who is charged with the commission of any crime in the calender, there is always charged a fee commensurate with the service, which, with the approval of the Court, becomes a sight draft upon the County treasury.

Even the clergy are not expected to go about doing the philanthropic work of their calling without material reward.

The people have been educated to believe that this sort of service is obligatory upon members of the medical profession, and it may very properly become one of the functions of a State medical society to do some educating in the other direction. This specific educational work of the people may begin, by a showing that physicians do not accumulate riches through the practice of medicine. That their work is both arduous and onorous, and demands a long preparatory training, which is equivalent to a considerable capital investment before any returns can be obtained.

Wealthy men and women need to be educated

through showings made by State societies, that it is incumbent upon them to endow professorships and scholarships in medical schools just as they do in academic and theological institutions. When this is done for the benefit of medical science and to aid young men and women in acquiring the knowledge they should be required to have by the State, will it be time to establish such arithmetical rules of proportion as may be practiced with equity between dispensaries, hospitals and medical schools.

Philanthropists are always well meaning people, and want to do the greatest good to the greatest number in making their gifts of money. State societies may take it upon themselves to say to the world that money given for hospital sustentation or establishment should carry with it a provision, that all hospitals enjoying such benefactions should be open for the instruction of students of medicine.

Every staff physician in a hospital which is sustained either by the State or by individual benefactions, should have the absolute right to take with him through the wards a limited class of medical students for the purpose of instruction. Where this privilege is not granted to the medical staff, State societies should say with emphasis, that gratuitous medical attention in such institutions is derogatory to the interests of medical science and to the medical profession. And the physician engaged in attendance at such institutions is guilty of unprofessional conduct.

Physicians should identify themselves with State societies, in order that their influence may be felt in rectifying existing abuses, and for the devising of plans for strengthening the stakes in which every practitioner has a personal interest.

THE AMERICAN MEDICAL ASSOCIATION.

Mr. Ernest Hart, editor of the *British Medical Journal*, has been invited as such by the Secretary and Chairman of the Committee of the American Medical Editors' Association to be the guest of the Association at their annual meeting at Milwaukee on June 5, 1893, in a letter in which he says: "The Association of the American Medical Editors will hold its tenth annual meeting at Milwaukee—fifty miles north of Chicago—June 5, 1893, on the evening immediately preceding the meeting of the American Medical Association at the same place. As Secretary and Chairman of the Committee, it gives me great pleasure to invite you to deliver the regular address before the Medical Editors' Association, and be our guest at a dinner given to especially welcome and make you acquainted with us and our work."

Mr. Ernest Hart has also received an official invitation from the President, Dr. Hunter McGuire, to be present at the meeting of the American Medical Association at Milwaukee at the same date and to deliver an address on cholera. Dr. McGuire, in forwarding the invitation, writes assuring a very cordial greeting, and other letters from the leading members of the Association tender equally warm and fraternal assurances.

Both these invitations have been accepted, and there is reason to believe that the occasion will be one which will afford opportunities for the mutual interchange of those professional courtesies and offices of good will which fitly express the sentiments and relations of members of our Association generally and of its officers towards the cognate bodies and towards the medical profession generally of the United States.—*British Medical Journal.*

THE MILWAUKEE MEETING.

The signs of the times indicate the near approach of the annual gathering of the hosts of medical men who constitute the active element of the American Medical Association. Already very complete programs for the several Sections are in the hands of the Section officers. In some instances we are pleased to note, special arrangements have been made to secure special discussions of papers to be read. These discussions not only add to the interest but greatly enhance the scientific character of the work of the meeting.

THE REVISION OF THE CONSTITUTION AND BY-LAWS OF THE AMERICAN MEDICAL ASSOCIATION.

At the last meeting of the American Medical Association, June, 1892, a committee was appointed to revise the Constitution and By-laws of the Association, if upon careful study they should decide that any change would advance the interests of scientific medicine. In conformity with this instruction, the committee met in Buffalo, N. Y., March 22d, and unanimously agreed to recommend to the Association at its coming meeting the adoption of the organic laws printed in preceding pages of this issue of the *Lancet*.

It is premised here that the key to these regulations is the *section work*. They are arranged so as to make this the greatest in amount, and the best in quality, possible under existing circumstances. If adopted by the Association, it will be an open declaration by that body that its watchword is hereafter Scientific Medicine.

It will be noted that there is but one class of members, which has the same individual duties and the same indvidual obligations. The qualifications for membership are but two: *First*, good standing in some one of the State societies or some local society recognized by the State society; *second*, the payment of the annual dues. Respecting the first, the officers of each State society are made responsible; for the second, the receipt of the Association Treasurer is required. Hence if any physician brings to the Committee of Arrangements a certificate of good standing in his State medical society, and the Treasurer's receipt for dues to date, he will be admitted to active membership at once. If personally or by letter he does this same thing yearly, he can remain an active member so long as he lives. All disputes respecting doctors must be settled by the State societies or the local societies—by the society officials if possible, or

if not, by arbitration as provided for by the Code of Ethics.

To be recognized by the American Medical Association, each State and its dependent local societies must accept the Code of Ethics of the Association as expressing the principles by which the conduct of doctors to each other and to the public should be guided.

The General Business Committee has the same powers as described by the report of the committee on its formation last year. The powers and duties of the several sections, with their executive committees, are stated with considerable fullness.

The annual addresses are eliminated, as belonging to a past stage of development, and the President's address is limited to thirty minutes. After the first day the hour of meeting of the general sessions of the Association is 4:30 P.M., all the preceding portion of the day being occupied by the section work.

It is so arranged that the real thinking for the Association shall be done in small standing committees, and the general meeting shall only hear the results of such thinking, accept or reject, or return it to the committees again for farther study in certain directions. It is believed that from their representative character and relative permanence these committees will be able to consider deliberately and recommend the Association wisely, and leave all other members free to devote the entire day to section work, and the evening to social commingling.

Full and definite arrangements are made for so sifting the work done as to make it representative of the best activity of the year in all departments, and so by its quality commend it to all scientific workers throughout the world.

However, the document is given entire, for the study and criticism of every member of the profession. It is desired that it should be read and studied in the light of the statement of the last sentence of the History. This says that these documents are "formulated for the purpose of promoting the best activity of a general medical organization of the profession of North America." It will greatly aid the reaching of the best results if critics will limit themselves to the pointing out of the changes which will better promote the attainment of this great end, through a medical society.

We trust also that gentlemen will divest themselves of their local interests, and make their study in the light of the interests of the profession of an entire continent.—*American Lancet.*

THE NEED OF A UNITED MEDICAL PROFESSION.

In a late issue the *Medical Record* calls attention to the fact that the New York Academy of Medicine, by a vote of 77 to 67, decided to continue "measures which affect the public welfare." This exhibited such a feeble interest in the public good that the *Record* fears it may infect other medical societies, and so the entire group have no practical weight in shaping measures affecting public health. It calls upon medical journals to awake to the situation and seek to organize the profession into active efforts for the common good. It says that quarantine laws are but a portion of the sanitary legislation which the profession should demand of the next Congress. It says: "We must aim to secure a creation of a central public-health organization worthy of the country and of the age, and qualified and empowered to deal efficiently with the great sanitary interests of our diversified climate, our world-wide commerce, and our heterogeneous population." It "thinks that a united and concerted effort of the medical press, in connection with medical societies, can organize and concentrate the influence of the profession more immediately and powerfully than any other or all organizations."

We desire to say "amen" to these views of the *Record.* We have the fullest faith that one hundred thousand doctors united upon a scheme of national health organization and work would at once secure the cordial coöperation of Congress in promoting the same.

But how shall it be secured? The medical press is a power, in spite of the fact that it is crippled and muzzled by commercial interests of divers kinds. In so far as we understand the situation, there is no free medical press in America worthy of the name. There are degrees of bondage, less or more, but the bondage still remains. The *Medical Record* and the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION are themselves restricted by commercial interests. Like the medical colleges, financial considerations hamper them, the fear of offense of influential firms and members of the profession. Because of this, it will be impossible to expect the medical press to speak as a unit on this or any other question.

The tendency of politicians to use medical societies for their selfish interests, was doubtless one of the reasons why so many of the New York Academy of Medicine preferred to restrict their efforts to medical science as a much safer and pleasanter method of work. Similar considerations will doubtless give a similar bent to the thinking of other medical societies.

The only really national organization the United States has ever had does not, for some reason, command the adherence of the entire profession as it should. Farther, the efforts made by its friends to enlarge its scope and power meet with indifference if not postive antagonism from those who should promote its welfare. Hence its voice is not heard above the din of selfish intrigues of the ignorant boodle politician.

We have some hope that all true physicians may in the near future see the necessity of supporting and developing this national organization, to the end that it may speak with a united voice the wishes of the profession of the United States on occasions like the presesnt. We especially direct attention to the report which the Committee on Revision of Constitution and By-laws will present to the Association at the coming meeting in June. If they see in this any new reason to believe that under its guidance this Association can be so developed as to be in fact the voice of the entire medical profession, they should lose no opportunity in securing the adoption of this new plan by the Association, not only by vote but by actual deeds. It is impossible to combine such vastly diversified elements, scattered over such wide extent of country, without much constant thought and persistent devotion to the idea of a National Professional Unity combined with the largest individual liberty and fair dealing with each.

Such unity will come in the future, but the influence of all medical journals and societies and individual medical men could greatly hasten the day of its coming. We need it, as the *Record* says, "just now." We trust the *Record* will give its best service to securing it at once. The most thoughtful men in the profession want it, in so far as they understand the situation, and it is one of the obligations of medical journals to make the others comprehend the situation.

The time is ripe for such an organization; the elements are plastic, and as never before are awaiting the artist's hand to be moulded into such a unity as shall represent the best thinking, the noblest feeling, and the most skillful work of the profession of the entire American continent.

The need is self-evident. The means for supplying it are at hand. What physician will fail to use the materials at his command for the attainment of a United Medical Profession in North America?—*American Lancet.*

ASSOCIATION NEWS.

SECTION ON DISEASES OF CHILDREN—PRELIMINARY PROGRAM.

1. Chairman's Address.
2. Observations on Isolated Cases of Diphtheria, by W. A. Dixon, Ripley, O.
3. Some Observations in Treating Cases of Diphtheria, by G. Benson Dunmire, Philadelphia, Pa.
4. Presentation of Aseptic Intubation Instruments with Statistics of Intubation, by F. E. Waxham, Chicago, Ill.
5. The Therapeutics of Diphtheria, by F. E. Waxham, Chicago, Ill,
6. A Case of Laryngeal Stenosis Complicating Scarlatina with Remarks upon Treatment, by J. A. Wessinger, Ann Arbor, Mich.
7. The Pathogenesis of Bronchitis, by W. S. Christopher, Chicago, Ill.
8. The Pathology and Symptomatology of Acute Bronchitis and Broncho-pneumonia, by C. L. Dodge, Kingston, N. Y.
9. Some Phases of Broncho-pneumonia in Children, by J. M. C. Carter, Waukegan, Ill.
10. The Pathology and Symptomatology of Croupous Pneumonia, by F. S. Churchill, Chicago, Ill.
11. The Therapeutics of Bronchitis, by I. N. Love, St. Louis, Mo.
12. The Cold Bath in the Treatment of Bronchitis in Infancy, by Geo. C. Mosher, Kansas City, Mo.
13. The Therapeutics of Broncho-pneumonia, by F. S. Parsons, Northampton, Mass.
14. The Therapeutics of Croupous Pneumonia, by J. A. Larrabee, Louisville, Ky.
15. The Treatment of Chorea by large doses of Quinine, by W. A. N. Dorland, Philadelphia, Pa.
16. Insane Disorders in Children: their Extra-asylum Treatment, by J. Madison Taylor, Philadelphia, Pa.
17. Acute Endocarditis in Children: Etiology, Symptomatology, and Treatment, by G. N. Highley, Conshohocken, Pa.
18. Chronic Endocarditis in Children: The Pathology, Valvular Lesions, Symptoms and Treatment, by M. P. Hatfield, Chicago, Ill.
19. Pericarditis in Children: Etiology, Pathology, Symptoms and Treatment, by W. P. Watson, Jersey City, N. J.
20. The Phenomena and Causes of Gastro-enteric Fever, (not typhoid), by J. Wellington Byers, Charlotte, N. C.
21. The Importance of Early, Effective Elimination in Zymotic Diseases in Children, by J. A. Work, Elkhart, Ind.
22. Milk Infection, by V. C. Vaughan, Ann Arbor, Mich.
23. Cholera Infantum. Its Treatment in Malarial Localities.
24. Dentition and Some of its Diseases, by Marion Thrasher, San Francisco, Cal.
25. Primary Syphilis and Gonorrhœa in Children, by B. M. Ricketts, Cincinnati, O.
26. Atresia Oris, by Edward Borck, St. Louis, Mo.
27. Etiology, Morbid Anatomy and Treatment of Infantile Hernia in the Male, by Thomas H. Manley, New York City.
28. Infantile Hernia, Dr. Wirt, Cleveland, O.
29. Paper by J. Lewis Smith, New York City, N. Y. (Subject to be announced).

THE AUSTRALIAN MEDICAL CONGRESS, recently held in Sydney, New South Wales, was very successful, over six hundred members having taken part, and one hundred and fifty papers having been read and discussed.

DOMESTIC CORRESPONDENCE.

Revision of the Constitution and By-Laws.

To the Editor of the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION:

The labors of the Committee on Revision of the Constitution and By-laws of the American Medical Association having been published for the criticism of members, it may be in order to examine some of the proposed changes and learn the character of their style, phraseology and spirit, and to ascertain if their formulation is distinct, if their arrangement is convenient, and if their adoption would be likely to confer any benefit upon the Association.

1. In the words of an earnest and able defender of the Code, Dr. Talley, it may be said that the revised Constitution and By-laws of a great National organization should be couched in language likely to do honor to the scholarship of its authors, and presented in a style perspicuous without dogmatism, copious without redundancy, and elegant without pedantry; plainly setting forth rules without magisterial assumption. Few if any of these requirements seem to have been fulfilled in the proposed new Constitution and By-laws, and many readers will probably be surprised that the Revision Committee, composed as it is of able men, should have prepared a document so loosely written, so inferior in style to the admirable model (the Code) constantly before its members, so incongruous, so defective in formulation, and so inconvenient in arrangement.

2. The evil intentions of the advocates of revision and disorganization are displayed, at page 345 of THE JOURNAL of March 25, 1893, in the form of an "amendment to the Constitution, to be known as Article VIII, entitled the Code of Ethics," proposed at the last annual meeting of the Association and to be acted upon in June, 1893. The apparent intention of this addition to the Constitution is that, in case of failure to secure the passage of a disfigured code of ethics or of a badly devised revision of the Constitution, the adoption of this amendment shall in reality be the abolition of the Code. Many more devices may be employed to effect the abrogation of the Code or the alteration of the consultation clause by amendments to the Constitution and By-laws, and perhaps by other dark schemes. Therefore delegates will need to be very watchful of all proceedings during the morning sessions of the Association.

3. A part of the plan of the disorganizers seems to be abolition of the Nominating Committee. The revisers have adopted this plan. If the new Constitution be sanctioned the States will be ignored and the Association will be in the hands of demagogues. This would be a grave offense against the rights of every State. For a long time past each State has been represented in the committee whose particular duty it is to nominate the officers of the Association. The assignment of this duty to the Business Committee is so manifestly wrong that any lengthened commentary thereon would be unnecessary. The Business Committee has as much work to do as it can properly accomplish, and the important duty of nominating officers, long since assigned to a special committee consisting of one delegate from each State, appears to have been performed to the entire satisfaction of the Association. This whole revision scheme seems much like a subterfuge for the abolition of the Code, and has originated in the unquiet minds of selfish men whose actions indicate that they look upon agitation as synonymous with progress.

4. It would almost be impeaching the discernment of many readers to more than allude to the multitude of other improprieties and defects in the proposed new Constitution and By-laws. It suffices to say that the revised document is far from being an improvement upon the original. More-

over, this does not appear to be an opportune time for revision. It would seem wiser to await the definite settlement of the ethical dispute. After that question is disposed of, then a committee could with propriety be appointed to revise the Constitution and By-laws. The unbecomingly precipitate action of this revolutionary movement is displayed mainly by the few who appear to wish the abrogation of the Code and the adaptation of the Constitution and By-laws to their own designs, which do not bear the scrutiny of the many members who have at heart the good of the National Association. The disorganizers assume to be *the* able and eminent men of the profession, but such an assumption need not necessarily convince other men that these self-selected few are thus gifted to the exclusion of all who fail to think as they do. The Association and the profession in general will doubtless listen respectfully to their instructions if they demonstrate their superiority with becoming modesty, if they do frame a better code of ethics than that of the Association, if they properly revise and arrange the Constitution and By-laws in good English, if they cease to make assertions unsupported by arguments, and if they acknowledge that it is not possible to formulate laws and moral maxims tersely and intelligibly without great preliminary training in the art of writing, ripe scholarship, and patient and persistent study. Since, however, they have failed to show that the Code needs modification, and since they have not succeeded in improving the Constitution and By-laws, in the name of the common sense of the profession let them abandon their unwise projects! May the disturbers of the peace of this beneficent confraternity soon emerge from the chaos of error into which they are plunged and seek the light of truth and reason, the discovery of which so often leads to the approval of what was before condemned; may they stifle their discordant clamors for injustice; may they turn their ardent zeal to good purposes; may they abjure these little miseries of perverted human nature that dwarf the intellect, corrupt the morals, and make men illiberal, narrow, selfish and covetous; may they then with renewed energy direct their labors to the general good, thus to subserve the interests and honor of a united profession and increase manifold their individual gain! Such are the sincere and best wishes of

A CONSERVATIVE MEMBER.

SELECTIONS.

FRONTAL HEADACHE AND IODIDE OF POTASH.—A heavy, dull headache, situated over the brow, and accompanied by langor, chilliness and a feeling of general discomfort, with a distaste for food, which sometimes approaches to nausea, can generally be completely removed by a two-grain dose of the potassic salt dissolved in half a wine glass of water, and this quietly sipped, the whole quantity being taken in about ten minutes. In many cases the effect of these small doses has been simply wonderful. A person who, a quarter of an hour before, was feeling most miserable and refused all food, wishing only for quietness, would now take a good meal and resume his wonted cheerfulness. The rapidity with which the iodide acts in these cases constitutes its great advantage.—*Alienist and Neurologist.*

WHEN ARE CURED DIPHTHERITICS SAFE?—ROUX and Yersin (Pasteur's laboratory) announced some time ago that the bacillus of diphtheria may be found in the pharynx of persons who have suffered from the disease, as long as five weeks after their apparent recovery and the disappearance of the diphtheritic membrane. Since then, other equally accurate investigations have, by actual inquiries, confirmed this statement. Tobieson (*Centralblatt für Bakt. u. Parasiten Kunde*) made examinations of forty-six cases of diphtheria, in which he found the germs of this disease at various periods after the disappearance of the membrane.—*Modern Medicine and Bacteriological World.*

THE CAUSE OF VALVE AT THE NECK OF THE BLADDER.—Opert (*Archiv für klinische Chirurgie*, Bd. 44) states the presence of a valve at the neck of the bladder, without being associated with diseases of the prostrate and bladder, is not uncommon. Mercier assumed that the condition existed only in old people, and operated with the best results in over 300 cases.

Von Dittel denies the statement that it is not dependent upon prostatic hypertrophy, but believes that it is due to a spasmodic contraction of the prostatic ring or internal vesical sphincter.

Socin claims that the causes may be either hypertrophy of the bladder as a result of stricture of the urethra, or tumors of the bladder, etc., and as a result of the hyperplasia, a bundle of transverse muscle fibres is raised up, and possibly proves a hindrance to perfect micturition.

Eigenbrodt reports the case of a man 24 years of age who, since boyhood, had suffered from difficult urination, so much so that at times the urine could only be voided by great straining. Examination of the urethra with the ordinary catheter was impossible, as only the smallest soft instrument could be made to enter the bladder. The first examination of the urethra was followed by complete retention and all ordinary measures to relieve the same proved fruitless.

As a last resort the urethra was opened in the perineum, a sound was easily passed until it reached the neck of the bladder, when further attempts at introduction were resisted. A small sound with a sharp curve was next tried, and after considerable manipulation it entered the bladder; a catheter was then passed along this sound as a guide and allowed to remain in the wound. Two days later the patient died, and at the post-mortem the following conditions were found: The bladder was greatly dilated and the contained urine was purulent. The urethral orifice was covered by a transverse, half-moon shape fold of mucous membrane. This fold consisted chiefly of mucous membrane; the base being somewhat thicker, contained muscular fibres, probably a part of the sphincter muscle. The prostate was normal.—*University Medical Magazine.*

TREATMENT OF GONORRHŒA.—(By Jonathan Hutchinson, F.R.C.S. London, Eng.) My treatment of gonorrhœa in all stages has for long been very monotonous. Almost without regard to stage or degree of severity, I prescribe the same remedies. I have long laid aside the traditions of my student days, which taught that salines only should be used in the acute stages, and that abortive plans were dangerous. I always use abortive measures, and mostly, I believe, succeed. At any rate, I never encounter ill consequences, and complications are rare. My prescription is a partnership of all three different remedies, and it is, I believe, important that they should all be used.

First, an injection of solution chloride of zinc, two grains to the ounce; next, sandal-wood oil capsules; and lastly, a purgative night dose, with bromide of potassium. The injection is used three or four times a day, the capsules (ten or twenty minims,) taken three times a day. The ingredients of the night dose are three drachms of Epsom salts and a half drachm of bromide of potassium. It is, I believe, the action of the last named in preventing congestion of the parts, which makes the abortive measures safe.

Moderate purgation and entire abstinence from stimulants are essential. If the case is very acute, and attended by swelling of the corpus spongiosum, I sometimes pre-

scribe tartar emetic, or tincture of aconite, but it is very seldom, indeed, that these are necessary. If the patient be well purged, there is no risk whatever in an abortive treatment from the day he comes under treatment. The risk of orchitis, prostatitis, cystitis, etc., comes in cases which have been allowed to develop rather than in those treated abortively. I should as soon think of delaying to use local measures in gonorrhœa, as I should in purulent ophthalmia.—*Lanphear's Kansas City Medical Index.*

GUAIACOL CARBONATE IN PHTHISIS.—Guaiacol carbonate is a simple, chemically pure substance, free from odor, insoluble in water, neutral in reaction and destitute of irritant effect on mucous membrane. It is not troublesome to the digestive organs, not being split up into its constituents, guaiacol and carbonic acid, until it has passed through the stomach. In the stomachs of phthisical patients, where generally there is an abnormally large quantity of saprophytic and parasitic bacteria, the compound is split up and a large amount of guaiacol set free by the fermentative processes. This arrests the development of the bacteria, and finally entirely frees the stomach from its unwelcome guests. The guaiacol set free is at once absorbed, so that even when large quantities of guaiacol carbonate are given there is no accumulation of guaiacol in the intestine. The use of the salt results in an improvement of the appetite followed by increased nutrition and body-weight, as well as by an augmentation of the general resistance of the organism to diseases. At the same time the anti-fermentative action of the guaiacol carbonate prevented the formation of gases in the intestines. Gradually the attacks of coughing lessened in violence and frequency, and the expectoration became loose and less abundant, assuming a more muco-purulent character. The fever was not directly influenced, and gradually entirely disappeared; the same was true of the night-sweats. The objective condition of the lungs corresponded to the improvement in the subjective feeling. Râles lessened and sometimes disappeared altogether; slight dullness often cleared up with surprising rapidity; in certain favorable cases large cavities steadily decreased in size within a few months, until finally they could no longer be detected. Frequent examination of the sputa often showed that the number of bacilli had diminished.—*Medical Standard.*

MISCELLANY.

THE ELEVENTH INTERNATIONAL CONGRESS OF MEDICINE.

The inauguration of the Eleventh International Congress will take place the 24th of September, 1893, in the presence of H. M., the King of Italy. The president is Prof. G. Baccelli, Rome; treasurer, Prof. L. Pagliani, Rome; secretary-general, Prof. E. Maragliano, Genoa.

The work of the congress will begin in the nineteen sections on the morning of September 25. It will be continued in accordance with the arrangements to be made and published both for the general session and the sections. Some of the general sessions will be devoted to scientific addresses delivered by scientists of all nations.

LIST OF THE SECTIONS.

1. Anatomy.
2. Physiology.
3. General Pathology and Pathological Anatomy.
4. Pharmacology.
5. Internal Medicine.
6. Diseases of Children.
7. Psychiatry, Neuropathology and Criminal Anthropology.
8. Surgery and Orthopedy.
9. Obstetrics and Gynecology.
10. Laryngology.
11. Otology.
12. Ophthalmology.
13. Odontology.
14. Military Medicine and Surgery.
15. Hygiene.
16. Sanitary Engineering.
17. Dermatology and Syphilidology.
18. Forensic Medicine.
19. Hydrology and Climatology.

REGULATIONS.

1. The Eleventh International Congress of Medicine will be inaugurated in Rome, on the 24th of September, 1893, and will close on the 1st of October.

2. Any physician may become an active member of the Congress by fulfilling the conditions of membership, inscribing his name, and securing his admission ticket.

3. Scientist of other professions who, through their special studies, are interested in the labors of the Congress, may acquire the rights and assume the duties of active members, and participate in the work of the Congress, both by communications and discussions.

4. The fee for admission to the Congress is twenty-five francs or five dollars. (Money order or check to the treasurer, Prof. Comm. L. Pagliani, Rome, Italy). It entitles to a copy of the Transactions of the Congress, which will be forwarded to the members immediately after publication.

5. The character of the Congress is strictly and exclusively scientific.

6. The work of the Congress will be divided amongst nineteen sections; every member is requested to indicate on paying his admission fee, the section for which he desires to be inscribed.

7. The provisional committee will arrnge the appointment, in the opening session, of the permanent officers. They will be a president, three vice-presidents, a number of honorary presidents and secretaries. Each section will elect, in its first meeting, its president and a certain number of honorary presidents, who shall alternately take the chair during the session. Some of the secretaries will be chosen from among the foreign members in order to facilitate the recording both of communications and of discussions in the different languages.

8. There will be daily sessions, either general or sectional. The times and numbers of the general sessions, and the business to be transacted in them, will be arranged by the president of the Congress.

9. The general sessions are reserved, (*a*) for the consideration of the common work of the Congress and of its common interests, (*b*) for addresses and communications of general interest and importance.

10. The addresses in the general sessions, and in such extraordinary sessions as may be arranged, will be delivered by members chosen by the committee for the purpose.

11. Papers for and communications to the congress must be announced on or before June 30, 1893. A brief abstract of every paper and communication, with their conclusions, must be sent to the committee on or before July 31st. All of them will be printed and distributed to the members by authority of the president. Such as arrive after that date cannot be expected to find a place on the regular order of business, and will be accepted only if time will permit.

12. The business of the sections will be arranged by their presidents, who will also determine the hours of meeting, avoiding those reserved for the general sessions. Two or more sections may hold joint meetings with the consent of their presidents. There will be no vote on scientific questions.

13. Fifteen minutes are allowed for the reading of a paper or communication. In the discussion every speaker can have the floor but once, and for five minutes only. To close the discussion the author of the paper is allowed ten minutes. Additional time may be given him by the president, by special resolution of the section, if the importance of the subject under discussion appear to require it.

14. The manuscript of all addresses, papers and communications read either before a general session or a section must be handed to the secretary before the close of the meeting. A special committee on publication appointed by the president, will decide which or what part of them shall be published in the Transactions of the Congress. Such members as participated in the discussions are required to hand to the secretaries their remarks, in writing.

15. The official languages of the sessions are Italian, French, English and German. The regulations, programs and daily bulletins will be published in the above four languages. During the meetings, however, a member may

be permitted to use, for a brief remark, any other language, provided some member present expresses his willingness to translate such remarks into any of the official languages.

16. The president directs the discussions according to the parliamentary rules generally obeyed in similar assemblies.

17. Persons not classified under article 3, who are interested in the labors of a special section, may be admitted by the president of the Congress. They will receive a special ticket on paying their admission fee; will not be entitled to a copy of the Transactions; and cannot speak in the general sessions nor in any section other than that for which they were inscribed.

18. The president may invite or admit students of medicine to attend and to listen. They will be given a special admission ticket free of charge.

GENERAL INFORMATION.

Journeys and Reduction of Fares.—The provissional committee has made arrangements with the different Italian and foreign railway and navigation companies, in pursuance whereof special reduced prices have been granted on the steamers and railways of this country and of the countries which the members of the Congress are to traverse.

In Italy the members of Congress will find tickets for round trips, starting from Rome; they will thereby be enabled to visit the most important cities and the various universities. In regard to this, further notice will be given.

The ladies of the members will be furnished ladies' tickets, which will entitle them to reduced fares granted to the members, and to participate in the festivities connected with the Congress.

Festivities—Besides the receptions which the kind and hospitable citizens of Rome will offer to the members, the Italian colleagues will endeavor to return to the best of their power, the kindness they experienced during their stay abroad.

On some evening, yet to be decided, the members of the different sections will join at a dinner, which will be given in one of the first hotels of Rome.

The Italian physicians have formed special committees to show the most hearty and kindly hospitality towards the foreign colleagues.

International Exhibition of Medicine and Hygiene.—On the occasion of the Eleventh International Medical Congress, an Exhibition of Medicine and Hygiene will be inaugurated in Rome, which will gather all that practically interest physicians and specialists. A special committee has already insured the coöperation of all the most important manufacturers of the world.

Hotels.—All the first and second class hotels of the Italian capital will afford to the members, during their stay, all desirable comforts.

THE GROSS MONUMENT.

The following circular will be mailed to the physicians in Chicago in a few days:

Dear Doctor:—The American Surgical Association at its last session adopted the following:

"*Resolved*, That the President be empowered to appoint a committee with authority to confer with the friends and admirers of the late Prof. Samuel D. Gross, and with the profession at large, for the initiation of a movement on the part of the Association, having for its object the erection of a monument to Dr. Gross in the city of Washington, D. C.

A committee of nineteen from said Association was appointed, with authority to confer with the profession at large, and solicit subscriptions.

It is not the purpose of the American Surgical Association to claim the honor of erecting this monument to the memory of one of its most distinguished Fellows; but rather is its intention to initiate a movement in which the entire profession should feel an equal interest.

Each member of the committee above named was instructed to appoint sub-committees in his own State, irrespective of fellowship in this or any other Association, which subcommittees will aid him in the collection of contributions to the general fund. Dr. John B. Roberts, 1627 Walnut St., Philadelphia, is the Treasurer of the Association, and will receipt for, and from time to time acknowledge subscriptions through the columns of THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION. In the event of a failure to collect a sum sufficient to complete the monument, the contributions will all be returned to the subscribers.

Dr. Nicholas Senn, the member of the above named committee for Illinois, appointed by direction of the General Committee, the following sub-committee for Chicago, namely:

J. E. Owens, T. W. Miller, D. A. K. Steele, D. W. Graham, to collect funds for the erection of the Gross Monument.

The sub-committee takes pleasure in commending this enterprise to your favorable consideration, and solicts such a cash subscription as you may find it convenient to immediately pay to Mr. W. J. Stephenson, of Stephenson & Co., physicians collectors, our authorized solicitor and collector; or such an amount as you may enclose at your convenience during the next thirty days to Mr. W. J. Stephenson, room 215, 85 Dearborn St., or to Dr. John E. Owens, 1806 Michigan Ave., or to any other member of the sub-commitee. At the expiration of the thirty days our collector will again call for such subscriptions as remain unpaid."

We have the honor to be very respectfully,

JOHN E. OWENS,
T. W. MILLER,
D. A. K. STEELE,
D. W. GRAHAM.
} *Sub-committee.*

MISSOURI STATE MEDICAL ASSOCIATION—The Missouri State Medical Association will meet at Sedalia, Mo., May 16, 17 and 18. An attractive program has been prepared. Delegates to the American Medical Association will be elected.

THE PAN-AMERICAN MEDICAL CONGRESS. SECTION ON DISEASES OF CHILDREN.—The organization of this Section is complete and the work of arranging a program is well advanced. Numerous valuable papers have been promised and the success of the meeting is assured. Physicians interested in diseases of children are cordially invited to attend these meetings, which give promise of great interest both to the specialist and general practitioner. Any American physician desiring to read a paper will please communicate at once with the Secretary, who will be pleased to furnish all needed information.

Executive President.—Dr. John M. Keating, Colorado Springs, Col.

Secretaries.—Dr. F. M. Crandall (English-speaking), No. 113 W. Ninety-fifth St., New York City; Dr. Damaso Lainé, (Spanish-speaking), Media, Pa.

Honorary Presidents.—Drs. S. S. Adams, Washington; A. D. Blackader, Montreal, Canada; Samuel C. Busey, Washington; Charles Warrington Earle, Chicago; F. Forchheimer, Cincinnati; L. Emmet Holt, New York; A. V. Meigs, Philadelphia; W. P. Northrup, New York; J. O'Dwyer, New York; C. I. Putnam, Boston; T. M. Rotch, Boston; J. Lewis Smith, New York; Louis Starr, Philadelphia; J. E. Winters, New York; Jesus Valenzuela, City of Mexico, Mexico; I. N. Love, St. Louis, Mo.

Advisory Council.—Drs. Wm. D. Booker, Baltimore; Augustus Caillé, New York; Henry D. Chapin, New York; J. P. Crozer Griffith, Philadelphia; M. P. Hatfield, Chicago; August Seibert, New York; Charles W. Townsend, Boston; Thos. S. Latimer, Baltimore; J. H. Ripley, New York; Jerome Walker, Brooklyn; Wm. Perry Watson, Jersey City.

OFFICIAL LIST OF CHANGES in the Stations and Duties of Officers Serving in the Medical Department, U. S. Army, from April 1, 1893, to April 7, 1893.

Major Augustus A. De Loffre, Surgeon, will be relieved from duty at Columbus Bks., Ohio, upon receipt of this order, and will report in person to the commanding officer, Ft. Logan, Col., for duty as post surgeon at that station. By direction of Secretary of War.

Capt. Edwin F. Gardner, Asst. Surgeon U. S. A., leave of absence granted for seven days is extended twenty-three days.

OFFICIAL LIST OF CHANGES in the Medical Corps of the U. S Navy, for the Week Ending April 8, 1893.

P. A. Surgeon Oliver Diehl, detached from U. S. S. "Essex."

Asst. Surgeon E. M. Shipp, ordered to Naval Hospital, Boston, Mass.